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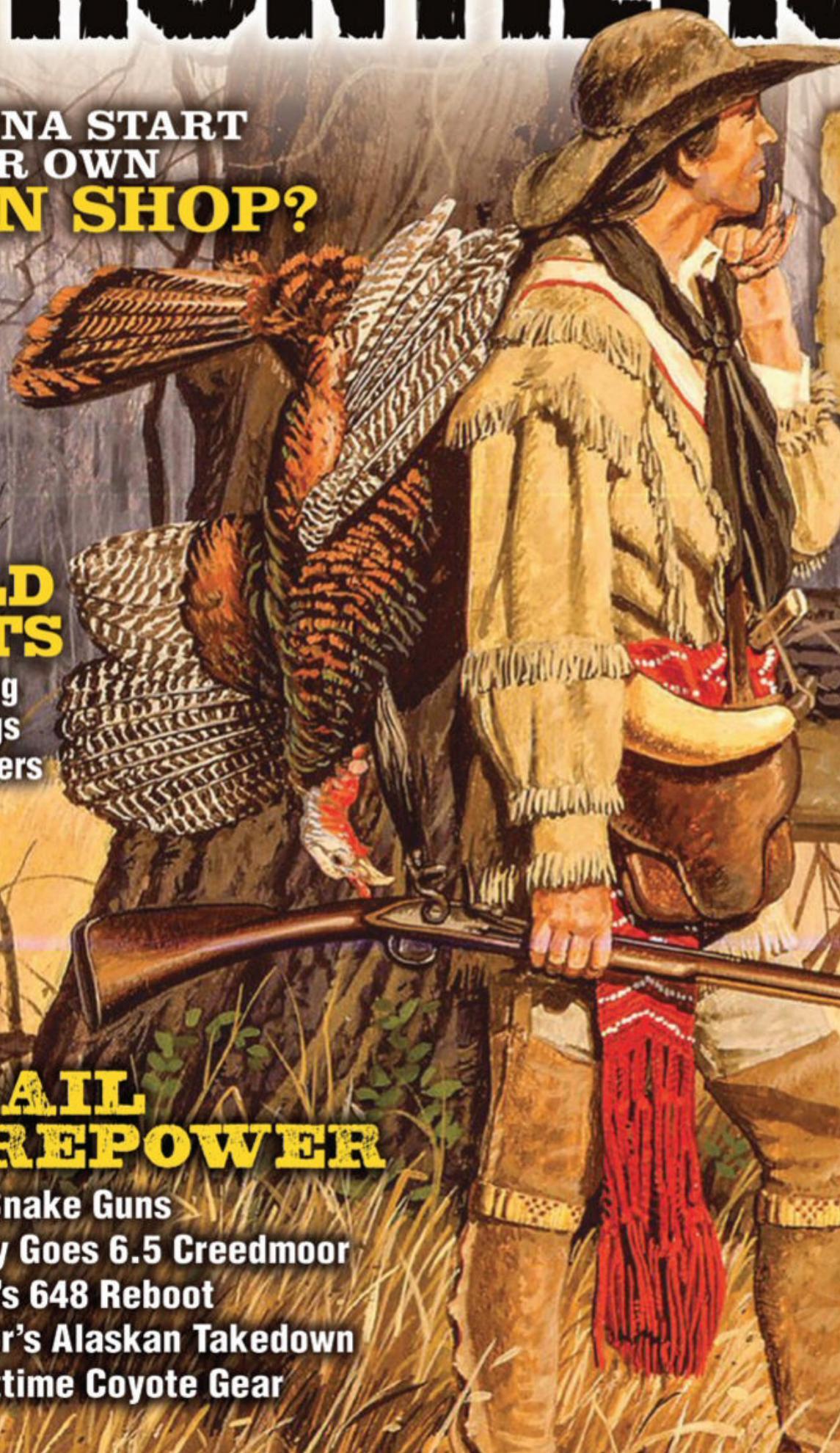
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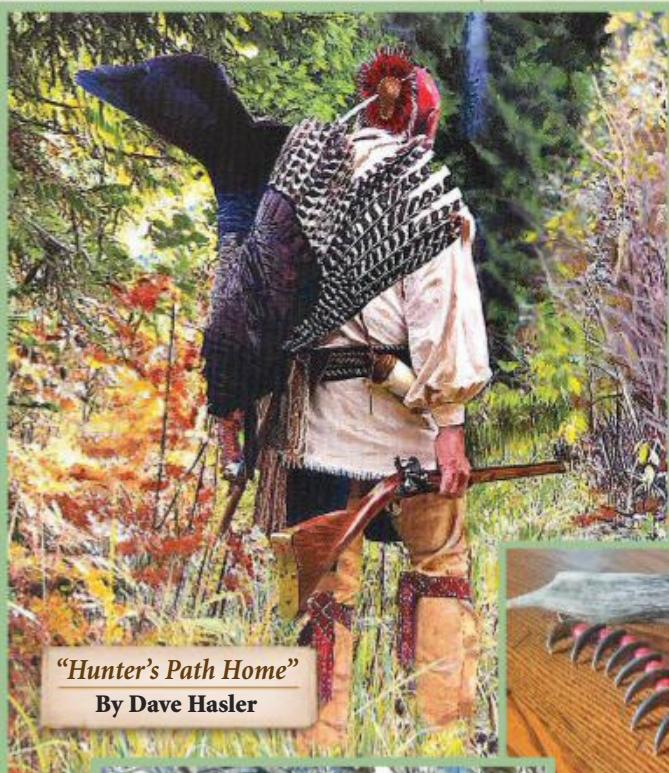
SPRING INTO ACTION

Soon the woods will come alive with the sounds of wild turkeys gobbling their fool heads off looking for hens. With hunting seasons on the horizon, we thought it'd be perfect to feature a timeless piece of art by David Wright for our spring issue of *American Frontiersman*.

Wright's "The Turkey Hunter" was inspired by the taking of his very first gobbler in the early 1980s while fielding a French-style 24 gauge that he built. Wright dedicated the painting to *AF* contributor J. Wayne Fears, who Wright says was responsible for introducing him to the heart-pounding sport of turkey chasing.

No question, hunting spring and fall birds is one of America's most thrilling hunting adventures, which calls for excellent woodsmanship, marksmanship and the ability to talk the wild birds' language in order to punch tags each season.

As our editorial team embarked on deciding what to put on this issue's cover, it dawned on us that we hadn't featured a wild turkey on the cover since 2013, when we used a Paul Calle piece for our premier issue! After pouring through hundreds of possible pieces of cover art, it came down to two finalists: David Wright and newcomer-to-*AF* magazine Dave Hasler. Although Hasler's "Hunter's Path Home" didn't take the top prize, we thought it worthy of sharing with you here, and



"Hunter's Path Home"
By Dave Hasler



Nick Antolik (left)
has captured the
frontier spirit with
his coonskin hat
and handcrafted
goods (above).

we wanted you to know that while the original was sold, limited-edition prints are available on davehaslerart.com.

We'd also like to take a minute here to give a shout-out to one of our readers, Nick Antolik, who was born and raised on the adventurous shores of Lake Erie in Pennsylvania. Antolik sent us a note and a photo after reading Armando Basulto's coonskin cap article in the winter issue. The one-piece hat shown is made from a tanned raccoon hide—a simple design with no cutting or stitching needed.

Turns out, he's a really interesting gent who hopefully will be contributing to *AF* in the future. Antolik grew up with furs, fins and feathers, and worked at a local nature center before attaining a wildlife management degree from Penn State. In his own words, "I have harvested everything from pheasant to elk with my recurve,

caught many fish

with my bare hands, and filleted some of those fish with a flint blade I fashioned onto an antler with deer sinew. I once framed a million-dollar house, but enjoyed building my teepee more. Cooking with cast iron comes naturally, as I heat with firewood seven months of the year in my woodstove. I make a wicked beaver chili and many types of jerky. Wildlife photography is a lifelong passion. I once spent enough time with a red fox that he eventually took whole eggs from my hands! At age 57, I've broken near 20 bones, but I'm still out there."

In our eyes, this isn't bragging. Antolik seems to capture the essence of what *AF* is all about—the guts, vision and determination to do things yourself. Big hat tip you, Nick! Enjoy the issue, folks, and may you all experience great successes afield this spring. —Nino Bosaz

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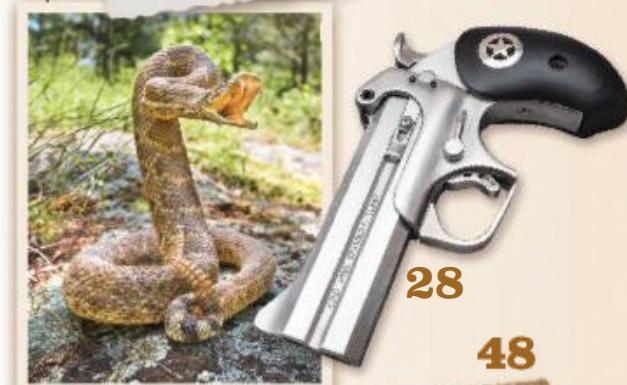
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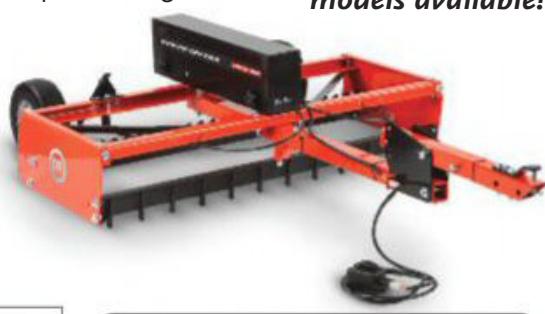
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FRONTIER HERO

After the Battle of King's Mountain, Joseph Greer traveled 600 miles through hostile territory to inform the Continental Congress of the patriots' victory.





JOSEPH GREER'S MISSION



Recounting the incredible journey
of the King's Mountain Messenger

BY J. WAYNE FEARS

FOR the past 12 days, the rawboned and unusually tall (well over 6'6") 26-year-old frontiersman had spent much of his time in the saddle riding more than 100 miles in snow and rain across the Appalachian wilderness. He was a volunteer in what was known as the Overmountain Army, a force made up of longhunters, trappers, Indian traders and settlers from the frontier on the west side of the Appalachian Mountains.

Unpaid and untrained as soldiers, the only meager rations they had were what they had in their packs or could forage from the wilderness as they made the forced march. They were skilled woods-men and experienced Indian fighters, however, and they were angry that the British commander, Major

Patrick Ferguson, had threatened to "come over the mountains and lay waste to their homes and crops, to hang their leaders if they didn't join him in his fight against the American patriots." The backwoods frontiersmen, who were busy fighting the Cherokees and trying to survive on wilderness homesteads with no time for the war back east with the British, had enough. The ragtag men had rendezvoused, formed an army and taken the fight to the feisty British major.

★ The Order

The young man was now fatigued beyond imagination. For the past 24 hours, he and 900 other frontiersmen had ridden constantly through a rainy night, with almost nothing to eat, to reach a little mountain in South Carolina called

“Sometime during that night, Greer slipped off the battlefield and began a month-long journey through enemy-held territory...”



“Tight Spot”

By David Wright

King's Mountain. Upon reaching it, he and the rain-soaked men attacked a well-positioned British army on top of the mountain. After three bloody attempts to fight their way to the top of the mountain, the patriots conquered Major Ferguson and his Tory/Loyalists army. As prisoners were being gathered, all the exhausted young patriot could think about was getting something to eat, unrolling his wet blanket and getting some sleep.

Not only was he wet and bloody, but his ears still rang from all the shooting and screaming of the past hour. Wounded men were scattered all about, many crying for help. His nostrils were filled with the sickening odor of blood and the sulfurous stench of blackpowder smoke that still

hung in the air around the mountain top. He had just found a large beech tree with thick, low-growing limbs that offered some shelter when he heard his name.

“Joseph Greer! Joseph Greer! Colonel Sevier needs to see you now!”

Slowly, Greer retied his blanket and walked over to where Colonel Sevier was barking orders to the victorious men, trying to bring some order to the chaos on the battlefield.

Sevier, seeing the tall youngster, motioned Greer to follow him off to the side of a confiscated British wagon where they could talk in private. There, he told Greer that he had selected him to take the message of the King's Mountain victory some 600 miles north to Philadelphia

where General George Washington was meeting with a disheartened Continental Congress. Sevier stressed just how important it was that the news of this victory reached Congress, because after the fall of Charleston earlier that year and the disastrous defeat at the Battle of Camden, many in Congress believed the war was not winnable. Sevier told him that the details of the King's Mountain victory would give Washington the boost he needed to convince Congress that winning the Revolutionary War was possible. He stressed to Greer that this message must get through as quickly as possible.

Sevier did not make the decision to pick Greer lightly. Since the 600-mile ride would take the messenger through

You're a sitting duck



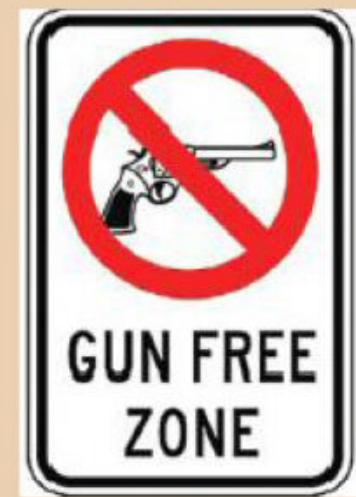
in a gun-free zone

Public safety is a critical part of the education campaigns of the Second Amendment Foundation, and with good reason. Without a self-defense option, we are all at greater risk.

The facts support our concerns about gun-free zones. The Crime Prevention Research Center (CPRC) recently finished updating a list of mass public shootings worldwide.

FACT: Over the course of 18 years, 1998 to 2015, the CPRC found 2,354 attacks and at least 4,880 shooters outside the U.S. and 53 attacks and 57 shooters within this country. The study found the U.S. makes up 1.49 percent of the murders worldwide, 2.20 percent of the attacks, and less than 1.15 percent of the mass public shooters.

FACT: Most gunmen are smart enough to know that they can kill more people if they attack places where victims can't defend themselves; 98 percent of mass public shootings since 1950 have occurred in places where citizens are banned from having guns. In Europe, every mass public shooting in history has occurred in a gun-free zone. And Europe is no stranger to mass public shootings. In the past eight years, it has experienced a per-capita casualty rate 50 percent higher than that of the U.S.



FACT: The U.S. is a relatively safe place from these shooting attacks precisely because so many attacks are thwarted by legally armed good Samaritans.

FACT: The evidence shows that gun-free zones are not the answer. Truth is, they are an added danger because they prevent legally armed citizens from defending themselves and their neighbors. It's time to get rid of gun-free zones. The U.S. has tried them for more than 20 years and evidence shows that gun-free zones actually increase the danger. Nobody wants to be a sitting duck in a maniac's shooting gallery.



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a wilderness that was populated with Indians who sided with the British, roaming bands of Tories, and many creeks and rivers to cross, the messenger had to know how to deal with Indians, use survival and land navigation skills, and be strong enough to stay the course until the mission was completed.

The colonel had known Greer much of his life. Greer was born on August 8, 1754, near Philadelphia. He was one of 11 children, including one set of twins. His father, Andrew Greer, an immigrant from Ireland, was an Indian trader and traveled into what is now east Tennessee and western North Carolina trading with the natives. Sevier's father was also an Indian trader about the same time and in the same locations. The Greer family was one of the first families to move into the Watauga River area in 1766, and the Sevier family soon followed. Joseph Greer grew up trading with Indians, and it has been recorded that he was one of the defenders of the Cherokee siege of Fort Watauga in 1776 in which Sevier was one of the commanders. Also, it has been written that Greer had worked with a land surveyor, probably on some of the land transactions in which Sevier was involved.

Since it was so important that the news of the victory reach Washington and the Congress, you might think that Sevier would also send other messengers. But there is no record of this, and no record of any other messengers reaching Congress with the news. It was up to Greer.

★ The Path

Sometime during that night, Greer slipped off the battlefield and began a month-long journey through enemy-held territory, knowing the message he carried was of the upmost importance for America to continue the fight for independence.

Much about his 600-mile trip has been obscured by time, and little of it was recorded, but it has been written that Greer's horse was shot out from under him by Indians. It was also said that during one part of the trip through Indian-held country, he was chased by a band of warriors. As night approached, he hid in a huge hollow log. The Indians ended up

making camp around the log, using it to rest, but they never discovered him. It's also a given that Greer lived off the land and crossed many creeks and rivers and, due to the weather at that time, many were probably frozen.

The best-known part of his trek was when he finally arrived in Philadelphia at the building housing the Continental Congress. Apparently, a Continental soldier guarding the door to the session refused to let Greer enter the meeting. But that wasn't going to stop him from delivering his message! One account says the tall frontiersman hit the guard with his bare fist, knocking him out, then lifted the guard up over his head and slammed him to the ground. Determined to get in, Greer kicked the door open where the Continental Congress was meeting. A stunned Congress looked in awe at the big man while he delivered his message about the victorious battle—that Ferguson had been defeated and killed.

One account says a delegate stood up and shouted, "With soldiers like him, no wonder the frontiersmen won!"

Congress did not know about the battle until Greer's unexpected arrival, but news of this victory quickly spread throughout the young country, reviving hope that the United States would emerge from this bloody war as a victorious nation. The message gave the Continental Congress a renewed belief in the cause, and the patriots' victory has been considered by many historians as the turning point in the Revolutionary War. Greer, now a hero, became known as the King's Mountain Messenger.

★ Lasting Legacy

Not much is known about what Greer did the next 10 years following his historic ride. It has been written that, following the war, he spent a few years hunting and exploring the Clinch River country and lands further west. Records show that he bought a store and got married in the settlement of Knoxville, Tennessee, in 1792. From 1799 to 1801, he served as a clerk on the Court of Equity in Knoxville.

His wife died in 1804, and soon thereafter he moved down into Lincoln County, Tennessee, where he had been awarded

a land grant of about 3,000 acres on the east fork of the Cane Creek for his service in the Revolutionary War. There, he built a log cabin near what is now the town of Petersburg. Greer continued to purchase more land and became successful as a large farmer, merchant and community leader. He remarried in 1810 and became the father of 11 children, including one set of twins, just as his parents had. Greer continued to be an active man throughout his life. He fathered his 11th child at the age of 76.

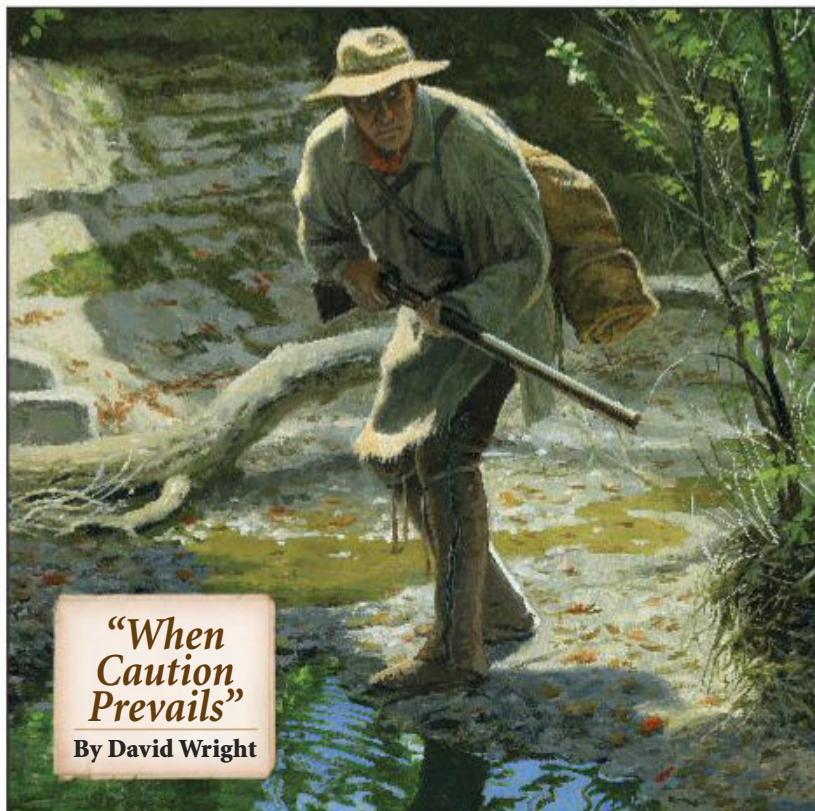
In 1831, Joseph Greer became ill after traveling from a trading trip through a snow storm to get back to see his new son, George. On February 23, he died of pneumonia at the age of 77. After his death, more than 7,000 acres were distributed to his heirs. The King's Mountain Messenger was gone, but his legacy would live on. ★

Tennessee Volunteer Park ★★

The cabin of Joseph Greer has been carefully taken down and is being restored on a new historic park, Camp Blount Historic Site, in Fayetteville, Tennessee. The historic site where the King's Mountain Messenger legacy will live on is on land adjacent to the Elk River, where Andrew Jackson mustered Tennessee volunteers for the Creek Indian campaign and for the War of 1812. The Greer cabin, complete with his story and a larger-than-life bronze statue of a Tennessee volunteer, will be two of the first monuments placed in the park.

It is fitting that the Joseph Greer Chapter of the Sons of the American Revolutionary War is one of the sponsoring groups of this park. It will allow the King's Mountain Messenger story to live on in future generations.

—J. Wayne Fears



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Caution
Prevails"*

By David Wright



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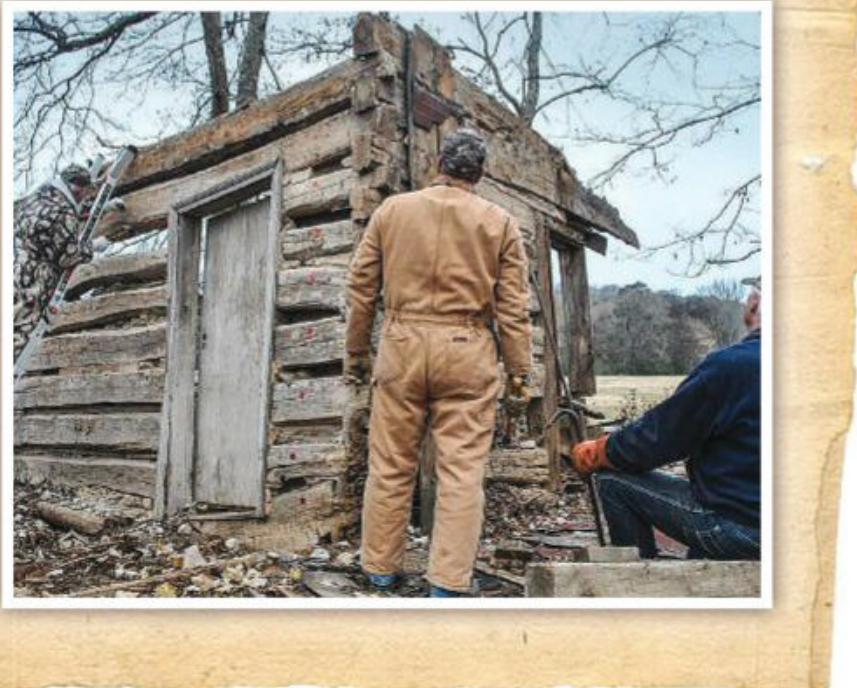
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BUSTING BLADE MYTHS

Forget the Bowies—it's time to learn what knives mountain men actually carried

BY DONALD WADE DAVIS

If you spend any time going to a big rendezvous these days, you'll inevitably come across participants wearing large, man-killing Bowie knives that they'll call "fighting knives." But I'm not so sure mountain men historically wore knives primarily for fighting in the early West, as period records indicate that tactical or fighting knives weren't wanted or needed on the frontier. These records show that the knives most commonly used and traded in the early West were in fact factory-made knives from Sheffield, England.

► Let's Get Real

Sheffield had been a cutlery manufacturing hub since the Middle Ages. In fact, Chaucer, writing in the 1300s, mentions his characters carrying Sheffield knives. By the 1820s, Sheffield cutlers had become masters of mass production.

Knives could be made so cheaply that, even after transportation costs across the Atlantic, they were available in the big cities of the East for as cheap as a few cents apiece at wholesale rates.

The two factors affecting knives on the frontier were scarcity and cost. Outside of Fort Atkinson, located near present-day Omaha, Nebraska, there were probably no more blacksmith shops than you could count on one hand between St. Louis and Santa Fe. Added to this was the transportation cost of moving coal, steel and other raw materials to the West. That consideration alone would have made the cost of locally produced knives incredibly high. If you're going to pay transportation costs, it's cheaper to pay them on already produced goods than to pay them on raw materials and then have to bear the cost of producing them on site. Therefore, I

believe it was doubtful that anyone could just walk into a blacksmith shop anywhere in the West between 1820 and 1840 and simply commission a knife. Instead, they purchased ready-made knives at trading posts and rendezvous.

Of course, we can only speculate about what types of knives

Records indicate that mountain men mostly carried knives that would help them process meat and prepare furs.



people brought with them to the frontier, but the types that were available to them once they got there is well documented. To mountain men, the primary purpose of the knife was to process game for food and skin beaver for their hides. Consequently, the first and primary role of such a tool was to cut meat.

Generally, a trapper had a set of six traps. He would set these traps out and check them twice a day. In the beaver-rich country of the upper Missouri River and Rocky Mountains, it's not unrealistic to expect that a trapper would command at least a 50-percent success rate. In *Journal of a Trapper*, Osborne Russell indicates that he often had a full set of beavers each time he set traps in a new area. It was only after a few days of trapping that the success rate went down to the point where it became necessary to move on to fresh ground.

So, let's go back to our assumption of a 50-percent success rate. That meant each trapper had at least six beavers to prepare daily. The trapper had to skin each beaver to remove the fur and then remove all of the gore and meat and bloody scraps that clung to the hide in order to prepare it. He then had to cut a willow branch and poke holes in the edges of the hide and string it in a roughly circular shape to dry. According to my friend Dennis Leonard of the American Mountain Men, who's trapped many beavers using period methods and tools, the process takes about 30 minutes. That translates to about three hours of knife work a day at only a





"The Beaver Men"

By Paul Calle

50-percent success rate. More time would be required if the trapper was more successful. This amount of labor necessitates a meat-processing knife, and a large Bowie would be useless in this kind of endeavor.

► The Butcher

Butcher knives have changed little in shape over the last two centuries. They were readily available at frontier trading posts and the annual rendezvous in the Rocky Mountains. In his book *The Fontenelle and Cabanne Trading Posts*, Richard E. Jensen provides the complete inventory for the posts for the year 1836. The inventory for the Cabanne post lists 432 Wilson butcher



knives available for sale. And that's just one style at one small trading post along the Missouri in one year. Suffice it to say that this style of knife was very common.

► The Scalper

"Scalper" was a designation given to a style of knife that in reality was a French kitchen knife. Again, we have a knife dedicated to processing meat. These knives were a little bit cheaper than the butcher knives and seem to have found favor with the Native Americans. The 1836 inventory of Cabanne's post lists 30 "Sup" (Superior?) scalping knives and 432 scalping knives. Again, that's over 460 of one particular



“...the knives most commonly used and traded in the early West were in fact factory-made knives from Sheffield, England.”

style of knife available at only one post during one particular year, meaning this knife was very common on the frontier.

► The Soldiers

Fort Atkinson existed from 1819 to 1827. All of the early fur brigades came through the fort, and it was a place where the idea



“While the idea of a tactical knife existed, it was almost always associated with newspaper accounts of duels, battles and the legacy of Jim Bowie.”



of a tactical blade could have taken hold with civilians. Both the 6th Infantry and Rifle Regiment were stationed at the fort, and both elements carried a tactical blade designed primarily with fighting in mind. For the 6th Infantry, that blade was the bayonet.

When infantry-men were expected to fight with blades, they intended to capture all the advantage they could get. So, they stuck their blades onto the ends of 5-foot-long muskets for extra reach. The uniform of the infantryman made no provision for wearing a belt knife, as there was no waist belt issued during the fur trade era. Instead, infantrymen wore two crossbelts over their shoulders. The bayonet was suspended from the right shoulder, opposite the cartridge box.

Officers carried swords. Again, we see that the idea was to keep the enemy at maximum distance to gain advantage with an edged weapon.

That leaves us with the Rifle Regiment. Unlike the muskets, the rifles had front sights but no way to attach a bayonet. Therefore, the rifleman was issued a tomahawk and a fighting knife. The rifles were also considered long-range weapons, and riflemen could engage from much greater distances. However, in the event of close-quarters



action, the rifleman, whose uniform had a waist belt, carried a knife designed for fighting. This was a government-issued knife, and every rifleman had one.

In September of 1812, the military storekeeper in Newport, Kentucky, received a shipment destined for the Rifle Regiment. It included 500 rifles, scalping knives, rifle belts, tomahawks and pouches. Therefore, it's safe to assume that the government, when faced with outfitting soldiers with a tactical knife, opted instead for the simple, common and cheap scalping knife to fit the bill.

► The Bowie

After his famous fight at the Vidalia sandbar in 1827, Jim Bowie's knife became all the rage in the South, where dueling was practiced.

The *Red River Herald* of Natchitoches, Louisiana, reported that "all the steel in the country was immediately converted into Bowie knives."

Jim Bowie died at the Alamo in February of 1836. In the fall of that same year, Hiram Cutler of Sheffield sent a letter with a sketch of an early Bowie knife to the proprietors of the American Fur Company. This knife—a true tactical design—was enjoying great popularity in the American South. Cutler stated that it was a "Texian [sic] knife that would probably suit Indians." Ramsay Crooks of the American Fur Company wrote back to Cutler, saying, "We have the drawing of the Texian Knife for which we thank you. The article is not wanted yet in our region." So, we see that hot upon the heels of Bowie's death at the Alamo, a knife that was



West wore a simple meat-processing knife that could be pressed into service

designed as a tactical blade was dismissed as not being necessary on the fur trade frontier of the early West.

While we cannot account for everyone, it appears that most people in the early

as a defensive tool if the need arose. While the idea of a tactical knife existed, it was almost always associated with newspaper accounts of duels, battles and the legacy of Jim Bowie. Sales of fighting knives were strong in the South, where dueling was still popular, but not on the early western frontier.

In short, we have to think about the primary role of the blade a man carried. A mountain man needed a meat-processing blade, so he carried such a knife. A young gentleman in the South who might have to participate in a duel needed a tactical blade, so he carried one. However, do not confuse the two. The fur company records are clear, and the factory-made butchers and scalpers were the knives that won the early West. ★

An advertisement for the Condor Terrasaur Knife. The top half features a blue and white logo with the word "CONDOR" in large blue letters and "Tool & Knife" in smaller blue letters. To the right, the text reads "CONDOR TERRASAUR KNIFE" and "A proven bushcraft and outdoors design by Joe Flowers. Engineered to be your premier outdoor knife for any budget." Below this, four knives with different colored handles (orange, green, tan, and black) are shown standing upright in a landscape with mountains and a blue sky. A blue and white shield logo with a stylized bird is in the bottom right. The bottom left contains a list of features: "• 3.0 mm, 1095 High Carbon Steel", "• Natural Finish", "• High Impact Polypropylene Handle", "• High Impact Polypropylene Sheath", "• Limited Lifetime Warranty", "• Satisfaction Guaranteed", and "• Hand Crafted in El Salvador". The bottom right provides contact information: "7557 West Sand Lake, Rd #106 Orlando FL 32819, Ph 407-458-9396, www.condortk.com".



Heading out into the wilderness
in period gear and clothing
allows the author to experience
nature just like Nessmuk did.

MIMICKING NESSMUK PART II

Collecting the legend's cutting tools, rifle, fishing gear and more

BY DONALD WADE DAVIS

IN the last issue of *American Frontiersman*, I detailed what it'd take to recreate the outfit and camping gear favored by famed outdoorsman George Washington Sears, who was more commonly known as Nessmuk. This time, we're going to go a little further.

Nessmuk utilized three primary cutting tools: an axe, a skinning knife and a pocketknife. Today, most bushcrafters refer to this setup as the "Nessmuk Trio." A lot of ink has been spilled about Nessmuk's trio of cutting tools in the 136 years since his book *Woodcraft and Camping* came out. Even today, on the many bushcraft forums on the internet, people argue about the applicability of this setup for modern tasks.

Three Handy Blades

First off, Nessmuk only provided a drawing of his setup. There are no measurements or guidelines. However, he did write about the trio: "The [knife] shown in the cut is thin in the blade, and handy for skinning, cutting meat or eating with. The strong double-bladed pocket knife is the best model I have yet found, and, in connection with the sheath knife, is all sufficient for camp use."

Nessmuk was a proponent of using the smaller pocketknife for camp chores and the larger belt knife for processing meat and food. Hunting wild game figured predominately in Nessmuk's time, and he simply needed a skinning blade to employ for this purpose. Unfortunately, his knife has not survived. However, you can purchase custom-made reproductions ranging from hundreds to thousands of dollars. Nessmuk more than likely had his made to his own specifications by a local blacksmith.

Large belt knives were available in Nessmuk's time. He had this to say about them: "The 'bowies' and 'hunting knives' usually kept on sale are thick, clumsy affairs, with a sort of ridge along the middle



of the blade, murderous-looking, but of little use; rather fitted to adorn a dime novel or the belt of 'Billy the Kid,' than the outfit of the hunter."

Nessmuk engaged in a lot of bushcraft. He built shelters, campfire reflectors and browse beds with just his little axe and pocketknife. Nessmuk makes the point quite often in his book that he is not in the forest to "rough it" but to "smooth it." So, I needed a skinning knife, a pocket knife and a double-bit hatchet.

For a skinning knife, I have a Russell Green River skinner that I've kept for more than 30 years. On period hunts, I've skinned everything from elk to antelope with it, and it has performed well. These knives were available at any hardware store in Leavenworth, Kansas, and have been in production continuously since the mid-1830s. Buying one of these would have negated the need for my persona to go to a blacksmith for a custom blade. I now had my belt knife.

I also have a handy pocketknife that I carry. When doing my civilian impression for the Civil War, I've quit carrying a big knife on my hip. My reasoning is that, as a civilian today, I don't normally carry a knife like that. Therefore, I've learned that the simple little pocketknife will do almost all of my cutting chores in camp.

This leaves the axe. Nessmuk had his custom-made by a blacksmith. I've opted to carry a Marbles double-bit hatchet. Similar to the kind of small double-bit hatchet that Nessmuk carried, it could have been commissioned or purchased by my 1873 Leavenworth persona.

The Elusive Rifle

Not much is known about Nessmuk's rifle. The picture of him posing with it seems to show a muzzleloading over/under type of rifle. He also seems to be carrying a muzzleloader at the time of his book's publication in 1884. Cartridge guns were readily available in 1884, but Nessmuk did not see the need to replace his old muzzleloader, which apparently served him well.

There are a couple of instances where Nessmuk refers to his rifle as his "Billinghurst." William Billinghurst (1807-1880) was a famous Rochester, New York, rifle-maker and sporting goods dealer. His weapons were well known for their accuracy, but he also sold fishing supplies. In fact, Billinghurst filed the first U.S. patent for a fly reel in 1859. He is quite possibly the

maker of the over/under rifle that Nessmuk carried. Nessmuk describes his rifle as such: "My rifle was a neat, hair-triggered Billinghurst, carrying sixty round balls to the pound, a muzzleloader, of course, and a nail-driver." Sixty balls to the pound is about .42 caliber.

I had picked 1873 as the cutoff point for all of my persona's

Nessmuk found that he only needed an axe, a skinning knife and a pocketknife to handle his bushcrafting and cutting necessities.



The author's simple 1870s-era fishing gear includes a cane pole and linen line.

gear. During this year, there was a watershed in the development of cartridge firearms. A lot of them went on to become quite successful. But all of this technology was brand new back in

1873, and parts and supplies weren't always available. If a hunter my age wanted something that was tried and true that had parts and components available everywhere, he would've chosen a muzzleloader. I wanted a good version that represented the best that technology had to offer in 1873—something a sportsman would have gravitated to and purchased for his adventures.

I currently use muzzleloaders for hunting and have for 40 years. For my persona, I settled on a half-stocked Plains rifle in .50 caliber. This style was an innovation of the 1830s with makers like Hawken and Dimick pioneering the movement. They represented the best in hunting muzzleloaders at the time. Shorter than the old long-barreled Pennsylvania/Kentucky types, they also boasted a thicker barrel and larger caliber to handle larger game. Many of the mountain men who went on to become scouts and guides in the 1850s and 1860s used this type of rifle.

The market in Leavenworth, being on the Great Plains, was heavily influenced by this type of rifle. There was even a gunsmith in town named John Biringer who made half-stocked Plains rifles in his shop. The Kansas State Historical Society has one on display in Topeka. My rifle resembles his quite a bit, albeit without a patch box. Currently, it is known as the Lyman Great Plains Rifle in .50 caliber, but it resembles numerous half-stocked Plains rifles that were being produced in this time period.

Nessmuk never mentions his shooting bag or powder horn in his writings, but I know he must have carried them to service





Not much is known about Nessmuk's muzzleloader, but the author settled on a .50-caliber Lyman Great Plains rifle.



his rifle. He does mention casting round balls and carrying a mold, so we have an offhand reference to his equipment.

Fishing Gear

I am a complete novice when it comes to period fishing gear. Having only recently discovered this fascinating aspect of the hobby, I am currently experimenting with a homemade cane pole and linen line. Here's what Nessmuk had to say about his gear:

"My little 8.5-foot, 4.75-ounce split bamboo which the editor of *Forest and Stream* had made for me cost \$10.00. I have given it hard usage and at times large trout have tested it severely, but it has never failed me.

"The dimensions of my second rod are 9.5 feet long and 5.75 ounces in weight. This rod will handle the bucktail spinners which I use for trout and bass, when other things have failed. I used a rod of this description for several summers both in Adirondack and western waters. It had a hand-made reel seat, agate first guide, was satisfactory in every respect, and I could

see in balance, action and appearance no superiority in a rod costing \$25.00, which one of my friends sported."

The Extras

I carry a few other pieces of gear that Nessmuk never mentions. One is a canteen. As Nessmuk lived in an age when the streams and rivers were still pure and you could drink from them without worry, he probably never needed one. However, modern sensibilities necessitate the need for one, so I carry a military-surplus canteen.

Nessmuk also never mentions a ground cloth of any kind. I've camped out in period style for 40 years and have always carried a ground cloth to separate me from the ground and any moisture that might wick up through my blanket. So, I chose a rubber-coated gum blanket, as it's lightweight and also serves the role of keeping me dry when it rains.

I throw in a woolen knitted cap for bedtime and for wearing around camp. In the evening when it gets colder, and especially at night while sleeping, I find a woolen cap to be invaluable on the trail. I also carry a small leather bag containing a file, blacksmith-made pliers, a housewife (period slang for a sewing kit) as well as coarse and fine whetstones. I also carry a candle for various purposes and a bandana that also serves as a rag and potholder.

In The Field

It's incredibly fun to go into the field dressed and equipped in period fashion.

“It's incredibly fun to go into the field dressed and equipped in period fashion.”



In my experience, I typically get one of three responses to my presence: People look away and pretend not to notice me; people stare incessantly, but for whatever reason do not approach; or people come up and are curious about the clothing and gear that I'm using. This is the response that I like best. It offers an opportunity to connect with people about our shared past and allows for some real teachable moments during the conversation.

The real thrill for me comes when I land that fish (no matter how small) on period tackle, when I harvest that game animal with a traditional muzzleloader, or when I wake up in the morning, boil up my first cup of coffee over an open fire and gather my woolen clothing around me for warmth. In my opinion, nothing beats an outdoor pursuit in the true Nessmuk fashion. With authentic period gear and clothing, you can experience nature in a whole new way—the way I'm sure Nessmuk intended when he wrote *Woodcraft* all those years ago. ★

HISTORIC SPOTLIGHT

THE KLONDIKE FIVE

Remembering
five famous characters from
THE ALASKA GOLD RUSH

BY MARK CHESNUT

The Klondike gold rush brought nearly 100,000 men and women into some of the harshest country in the world.

Alaska in the late 1890s was the greatest of the great frontiers, and those living in the rugged, vast wilderness were true mountain men, scraping out a livelihood hunting, fishing, trapping and trying to stay alive.

The first reports of Klondike gold reaching Seattle and San Francisco in 1897 started a stampede of men and women on the long, hard trek to Skagway, Alaska, and other port towns that yielded access, albeit treacherous, to the profitable gold fields. Ironically, the promise of becoming rich drew many who had never even spent a night without a roof over their heads. Most were ill-suited to brave the wilds, and many perished without a penny to their names.

Despite the conditions and long odds against them, a small percentage of participants did manage to strike it rich. And an even smaller percentage, like the five described here, became an important part of Alaskan history.

George Carmack

 Born in California in 1860, George Washington Carmack was the prospector credited by many

with sparking the Klondike gold rush. Some historians claim he was the man who found the first large piece of gold there. Others say that credit should be given to Skookum Jim Mason, Carmack's brother-in-law, but Carmack received the credit because Mason was a Native American.

Regardless, Carmack, who had already been trapping, cutting wood and packing goods in Alaska for 11 years, was involved in the discovery claim and became a wealthy man. Legend has it that Carmack, who was friendly with the Tagish Indians, along with Mason and his nephew, Dawson Charlie, were salmon fishing on Rabbit Creek (now called Bonanza Creek) when, on August 17, 1896, he found a gold nugget the size of a human thumb. The rest, as they say, is history.

Some reports claim that Carmack made more than \$1 million during his years in the Yukon, and he did indeed become a very wealthy man. Yet many other Klondike miners weren't impressed, giving him the dubious nickname "Lyin' George" because of his propensity to embellish a story.

Carmack and his wife later moved to a ranch in California, but he never quite lost his gold fever. He died in 1922 at the age of 62, still working a gold claim in the Cascade

Mountains east of Seattle. His name lives on today, as the town of Carmacks along the Yukon River in Canada was named after him.

Klondike Kate

 Kathleen Rockwell, better known as "Klondike Kate," also held the title of "Queen of the Yukon" during her time in Alaska. A spirited young lady who was expelled from boarding school as a teen, Kate never mined a bit of gold, yet she still made more money than most of the miners who flocked north for the rush.

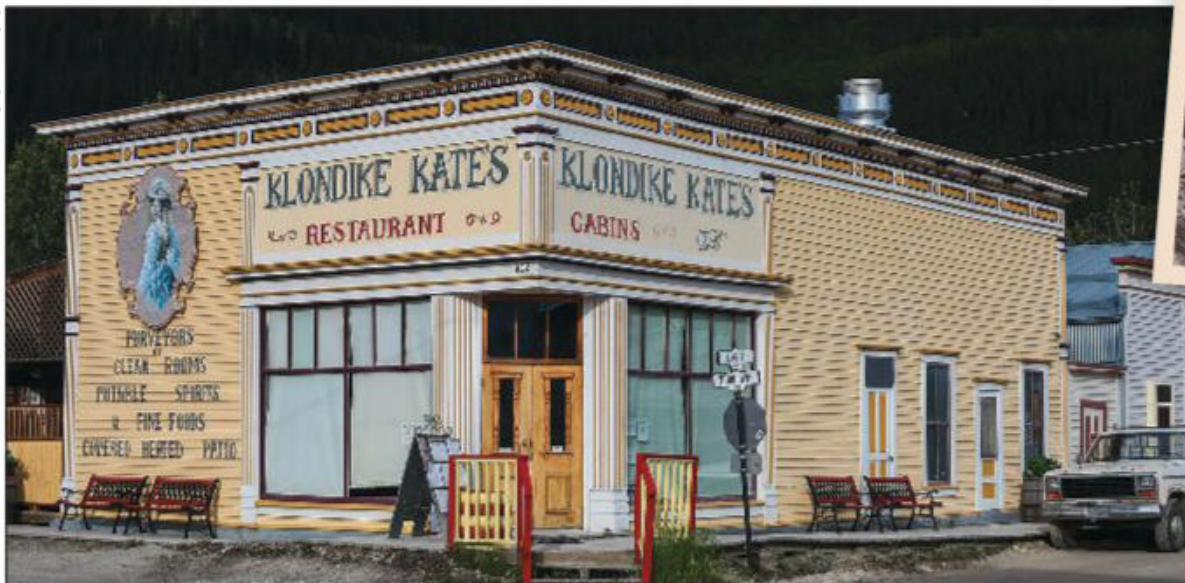
Kate arrived in Whitehorse in 1899. She later moved on to Dawson City, where she was a dancer for the Savoy Theater, the largest theater company on the Klondike. In the book *Good Time Girls of the Alaska/Yukon Gold Rush*, author Lael Morgan said Kate "had natural red hair, violet eyes, long black lashes, and a splendid figure. Her face was a delicate oval of innocence in marked contrast to her husky voice, her worldly experience, and her blatant sexual appeal. Kate also had talent and grace—rare qualities among Dawson showgirls. Her special come-on was something called the 'pixie stare,' a projection of sweet innocence and raw sex that few men



Clockwise from right:
prospector George Carmack,
gangster Soapy Smith, Eric
Hegg photographs, Klondike
Kate, Eric Hegg beside his most
famous photograph of Chilkoot
Pass, and a stamp inspired by
“The Cremation of Sam McGee.”

THE KLONDIKE FIVE

iStock Photo



The legend of Klondike Kate
lives on today in Dawson City (left), just like
Eric Hegg's gold rush photography (above).

could resist, but it was her capacity for fun that ultimately won them."

During her few years in the Yukon, Kate did well financially and reportedly amassed dozens of proposals from lonely miners. Some reports say that she made \$30,000 in one year, thanks largely to tips from hard-working men starving for female companionship.

Kate later moved to Seattle, then to a homestead in Oregon. Asked by her biographer, Rolv Schillios, if she had any regrets, Kate said, "I wouldn't have known what I know now if I hadn't lived the way I have." She died in 1957.

Soapy Smith

 Born in Georgia in 1860, Jefferson Randolph "Soapy" Smith II made a fortune in Alaska in a much more nefarious way than most others who participated in the gold rush. One of the most well-known con men and gangsters of the 1800s, Smith had already plied his trade in Texas and Colorado before seeing the tremendous bounty that Alaska had to offer.

Heading north in 1897, Soapy soon became known as the boss of Skagway, the town many miners passed through on their way to search for gold. Historians tell us that he ruled Skagway with an iron fist, and his saloon became known as the real city hall. A heavy drinker with a vile temper, Soapy defrauded many miners and businessmen of the profits they had made, never showing any remorse for the lives he ruined.

Tired of his violent and illegal antics, Skagway citizens eventually formed a 101-man militia to run Soapy out of town. But

he rounded up about 300 ne'er-do-wells of his own and rebuffed the citizenry's attempt to get rid of him. He later even had his "militia" approved by the U.S. Department of War, firmly entrenching his control of Skagway.

Soapy's career came to an end on July 8, 1898. After he cheated a miner out of \$2,600 in gold in a game of three-card Monte, townsfolk became irate and organized a meeting. When Soapy decided to attend, armed guards outside decided to shoot him. His last recorded words were "My God, don't shoot!"

Eric Hegg

 Swedish-born photographer Eric Hegg headed to Alaska in hopes of finding gold and photographing the rush. The iconic pictures he took depicting the daily life and hardship of gold diggers have become his lasting contribution to Alaska's interesting history.

Hegg arrived in Skagway in 1897 and opened a photography studio there. He, his brother, Peter, and some other partners later opened a studio in Dawson, where they sold portraits to frontiersmen and did some mining of their own. Hegg even had a darkroom on the boat he used on the Klondike River, allowing him to travel and process his photos at the same time.

Hegg's most famous photograph shows miners and prospectors by the dozens climbing the dangerous ice stairs of the Chilkoot Pass on their way to the gold fields. But his photography showing the construction of the historic White Pass and Yukon Railroad near Skagway is equally

impressive. But a bitter divorce with his wife, Ella, forced him to sell many of his negatives and photographs to a firm that later sold his work without his name on it.

Sam McGee

 Sam McGee might be one of the most well-known names of the gold rush era. But the antics ascribed to him are mostly false.

The poem "The Cremation of Sam McGee" by Robert Service is one of the most important pieces of Yukon literature and is often quoted at length by those living there. The poem tells the story of the cremation of a prospector who froze to death near Lake Laberge. On the night before his death, the prospector asks the narrator to "swear that, foul or fair, you'll cremate my last remains." Since the narrator understands that "a pal's last need is a thing to heed," he agrees to perform the dismal task.

After starting the fire, however, he couldn't help but look into the cabin on the abandoned boat on Lake Leberge, where he had laid the body for cremation: "And there sat Sam, looking cool and calm, in the heart of the furnace roar; / And he wore a smile you could see a mile, and he said: 'Please close that door. / It's fine in here, but I greatly fear you'll let in the cold and storm— / Since I left Plumtree, down in Tennessee, it's the first time I've been warm.'"

In reality, Sam McGee was a road builder who did some prospecting in Alaska during the rush, but he lived until 1940. Service was working in the Whitehorse branch of the Canadian Bank of Commerce when he saw McGee's name on a form and decided it would be perfect for a piece of poetry he was composing. ★



Actual size
is 40.6 mm

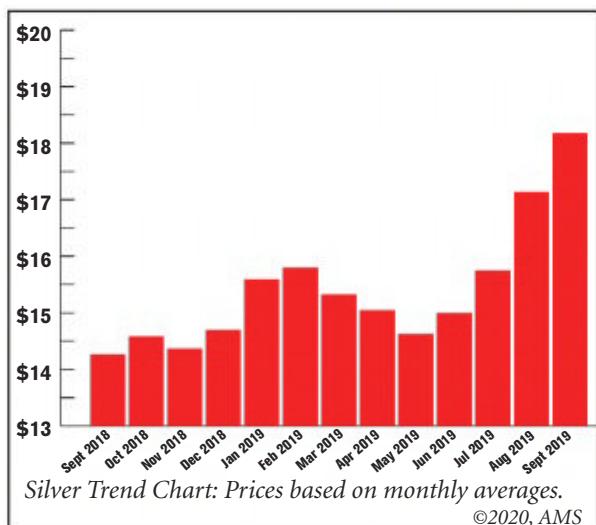
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ALASKAN TAKEDOWN



Taylor's & Company offers a handy .44 Magnum for STOW-AND-GO SURVIVAL



BY WILLIAM BELL • TERRILL HOFFMAN PHOTOS

With firearms, I like to "Keep it simple, Stupid." I prefer revolvers, double guns and lever-action rifles because of their ease of use. With the latter, there are no magazines to lose or damage, and they're usually ready to go right out of the box. On top of that, while there are big bores in powerhouse cartridges like the .45-70 Government, many lever actions are available in common handgun calibers, so you use the same ammo across platforms like cowboys back in the old days.

This brings me to the 1892 Alaskan Takedown from Taylor's & Company Firearms. What first drew me to this gun was its combination of traditional looks, functionality and modern technology. This carbine is based on the time-proven Winchester Model 1892 invented by none other than John Moses Browning. But like many late 19th century/early 20th century long guns, it has a takedown feature that allows you to break the 34-inch-long gun down into two halves for easy storage and transport.

• Taylor Made

Taylor's & Company Firearms offers the Chiappa-made 1892 Alaskan Takedown in two calibers: .357 Magnum and .44 Magnum. Every model also has black hard-wood furniture with soft-touch rubber over-molding, and you can choose between hard chrome or black for the receiver and barrel. The red fiber-optic front sight is dovetailed into

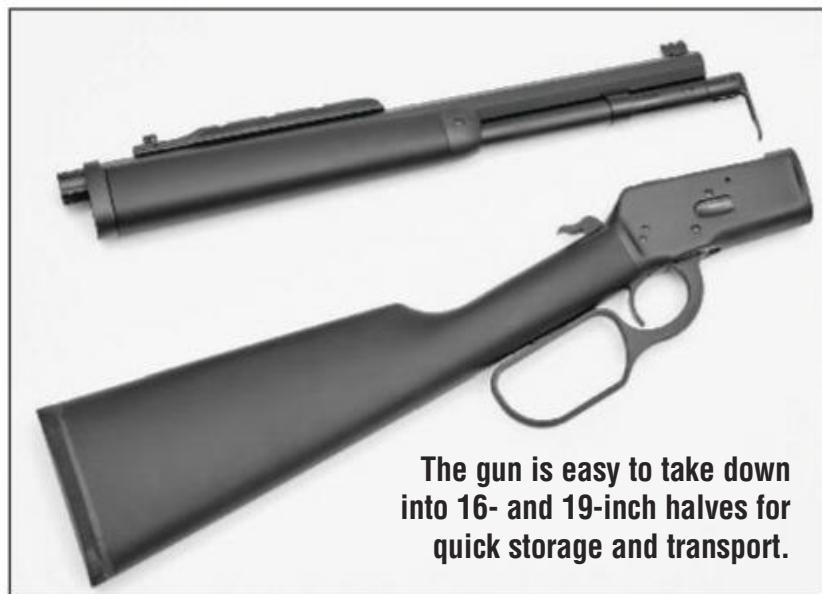
the barrel so it's easy to adjust, and Taylor's includes an optics rail with an adjustable peep sight at the rear.

For this article, I got my hands on a .44 Magnum model with a 7+1 capacity and a 16-inch octagonal barrel. The D-shaped lever is large without being as big as the loops John Wayne preferred. My test gun also looked all business with its matte black finish. The only highly polished parts were the bolt and the two locking lugs, the tops of which are exposed at the rear of the action. A once-over indicated a good deal of attention paid to the fit and finish, and the overall manufacturing quality appeared top tier. I didn't notice a lot of stamping or laser etching on the gun, and the action worked smoothly. According to my Lyman digital trigger pull gauge, the average trigger pull weight was 4.7 pounds with no creep or overtravel.

This is a compact carbine that weighs in at just 5.9 pounds unloaded. The heavy octagonal barrel gives it a muzzle-heavy

With its matte black finish and rubber-overmolded furniture, the 1892 Alaskan Takedown is all business.





balance, which makes it swing and point more naturally. The rifle comes up to your shoulder quickly, and my eye was quickly drawn through the peep sight to the glowing red fiber-optic front sight.

To take the Alaskan down into two sections, the first step is to make sure the gun is cleared and completely unloaded. Next, use the lever under the magazine tube to rotate the magazine counter-clockwise to unscrew it. The tube will slip forward out of the receiver and magazine ring. Now open the action lever and leave it open. Rotate the barrel 90 degrees to the left and you'll feel the two halves give. Then just pull them apart. It doesn't get much simpler, and reversing the process reassembles the rifle. Also note that there is no manual safety on this gun, but the hammer can be thumbed back to the first "click," which will lock the trigger.

On The Range

Like other .44 Magnum weapons, the Alaskan Takedown will also chamber .44 Special cartridges. So, for my range excursion, I chose two .44 Special defensive loads from Black Hills and Hornady. For .44 Magnum rounds, I chose loads from Black Hills, Federal Premium, Remington

and Sig Sauer. My first task at the range was obtaining some velocity figures for this ammo selection using an Oehler Model 35P chronograph. The carbine's 16-inch barrel provides a lot more speed for these handgun cartridges. The muzzle velocities ranged from mild to wild, and you can see the results in the performance table.

Federal's 180-grain

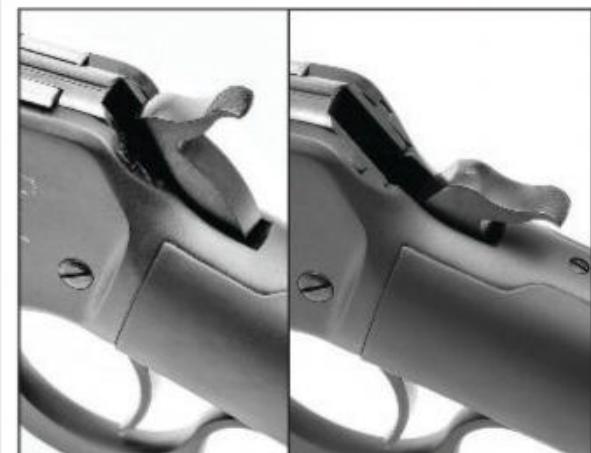
JHPs were the fastest at 2,102 fps, producing 1,775 foot-pounds of energy (fpe) at the muzzle. The recoil with the lighter bullets, especially the .44 Special loads, wasn't bad, and none of the ammo was punishing. I also didn't notice any excessive muzzle flash or blast while shooting outdoors during daylight. And with the Black Hills .44 Special ammo, the Alaskan Takedown honestly felt like a pellet rifle.

Because of the rifle's iron sights, I decided to test its accuracy at 25 yards, shooting all of my five-shot groups from the bench using a sandbag rest. Right out of the box, the gun shot low with most of the ammo. The ammo that came the closest in matching my point of aim was the Federal 180-grain JHP load. But the most accurate rounds were Remington's 275-grain Core-Lokt JHPs, which had a best group measuring 1.21 inches wide and an average of 1.67 inches. Second place went to the light Black Hills .44 Specials with a best group of 1.27 inches and an average of 1.75 inches. These should make great small-game or plinking cartridges.

Next, I moved my target stand back to 50 yards to see how the Alaskan Takedown would fare using the same oblong B-27 target center that I used at 25 yards. Again,

every load shot a tad low, but I compensated with some "Kentucky elevation," so to speak. All of the hits stayed on the paper, and the best three-shot group came in at 2.27 inches with the Black Hills .44 Special ammo. Most of the rest had three-shot groups in the 3.5- to 5-inch range. At 50 yards, the fiber-optic front sight covered about a third of the target.

To see how the Alaskan Takedown might fare on medium-sized game, especially for a survival scenario, I set up an anatomically correct deer target at 50 yards. From a standing position using a post as a makeshift support, I shot three groups with .44 Magnum rounds from Black Hills, Remington and Sig Sauer. Unfortunately, I didn't hold over quite as much as I should have, and most of my impacts were below the target's heart



While the Alaskan Takedown doesn't have a manual safety, the hammer has a half-cock position (left) that locks the trigger.

area. Had the elevation been correct, however, all but two shots would have hit the heart. Thus, I have little doubt that the 240-, 275- and 300-grain JHP bullets would have been effective, and they are good brush-buckers, too.

I also wanted to see how the Alaskan Takedown would do in a lethal-force situation. For this scenario, I used a realistic

SPECIFICATIONS

TAYLOR'S 1892 ALASKAN TAKEDOWN

- **Caliber:** .44 Magnum • **Barrel:** 16 inches • **OA Length:** 34 inches
- **Weight:** 5.9 pounds (empty) • **Stock:** Rubber overmolded • **Action:** Lever
- **Sights:** Fiber-optic front, adjustable rear • **Finish:** Matte black
- **Capacity:** 7+1 • **MSRP:** \$1,412



“bad guy with a gun” target set up at 50 yards. I also loaded the gun with Federal’s .44 Magnum JHPs and Hornady’s .44 Special FTXs because both types offered less recoil while offering good velocities, plus they hit closer to the point of aim. I alternated cartridges and filled the magazine, then backed off 7 yards.

My first exercise was to shoot as fast as I could without using the sights—just pointing the carbine and firing all seven rounds. I had no trouble at all with this, and all of my shots went into center-mass. Once I reloaded, I moved back to 25 yards. There, I fired off-hand using the sights, alternating with shot to the chest and one to the head until I was out of ammo. Two of the headshots were in the “fatal triangle” with one in the forehead. All of the center-mass shots were inside the square scoring area of the target. I then retreated back to 50 yards, loaded the Alaskan Takedown as before, then engaged the target from behind a barricade, shooting two shots while standing from the left side, two while standing from the right side, and three while kneeling from the right side. Two shots went low outside the scoring squares but stayed within the thoracic area. I could



Rotate the lever under the muzzle (top) to remove the magazine, then open the action lever (above) to break the gun into two halves.



Whether shooting from the bench or off-hand and reloading on the fly, the Alaskan Takedown ran reliably with all of the test ammo.

definitely tell the difference between the .44 Magnum and .44 Special loads when firing, but the bad guy was definitely DOA.

Fully Reliable

After that, I did some informal plinking to make sure the Alaskan Takedown functioned reliably. I levered in rounds sideways and even upside down, but none of the cartridges dropped out like I’ve had

happen with some other lever guns. I had one feeding bobble with a .44 Special round—the sole malfunction of the day—but it was easily corrected.

For the most part, the .44 Specials worked just as well as the .44 Magnums. An advantage

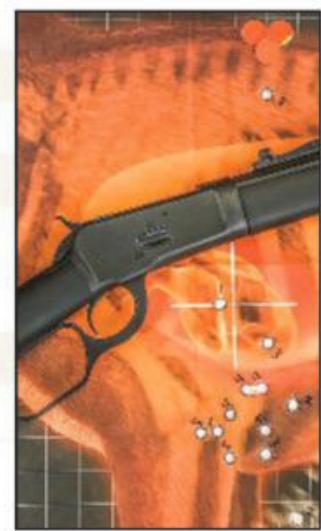
I see in a lever gun like this is being able to fire a couple of rounds, then load a couple from your belt, pocket or wherever. As long as you have cartridges, you don’t have to shoot the gun dry. You can load as you go. I was really impressed with this versatile little carbine and truly believe it has what it takes to make a good survival weapon. For more information, visit taylorfirearms.com. 

PERFORMANCE

TAYLOR'S 1892 ALASKAN TAKEDOWN

.44 MAGNUM	VELOCITY	ACCURACY
► Black Hills 300 JHP	1,311	1.58
► Federal 180 JHP	2,102	2.07
► Remington 275 Core-Lokt	1,417	1.12
► Sig Sauer 240 V-Crown JHP	1,640	2.24
.44 SPECIAL	VELOCITY	ACCURACY
► Black Hills 210 LFP	912	1.27
► Hornady 165 Critical Defense FTX	1,233	2.40

Bullet weight measured in grains, velocity in fps by chronograph and accuracy in inches for best five-shot groups at 25 yards.



GUN TEST



The Ruger LCRx (top) and Bond Arms Ranger II (above) are both great options for dealing with snakes as well as predators of the two-legged variety.

SNAKE SLAYERS

**Two superb serpent-wrecking solutions
for that summer peace of mind**

BY GARRETT LUCAS

Snakes. Why did it have to be snakes?" My childhood hero, Indiana Jones, felt pretty much the same way about those hellspawn as I did. Whether it comes from deep-rooted Bible Belt symbolism or a couple of traumatic encounters during my youth, I will admit to a deep animus toward the slithering monstrosities. I won't go out of my way to kill a poisonous snake, but woe be unto those that cross my path.

I'm pretty much a "live and let live" kind of guy, but because of concerns for my family and pets, if a copperhead or rattler comes

around camp or where I live, it's going to be dispatched posthaste. For that reason, during snake season, I like to have a gun handy at all times. Recently, I decided to reassess my snake gun of choice and looked at a couple of offerings, including the Ruger LCRx and Bond Arms Ranger II.

Rockin' Ruger

Ruger's LCR revolvers are quite popular, sporting a polymer fire control housing for lighter weight and a best-in-class double-action (DA) trigger. Originally offered with a shrouded hammer



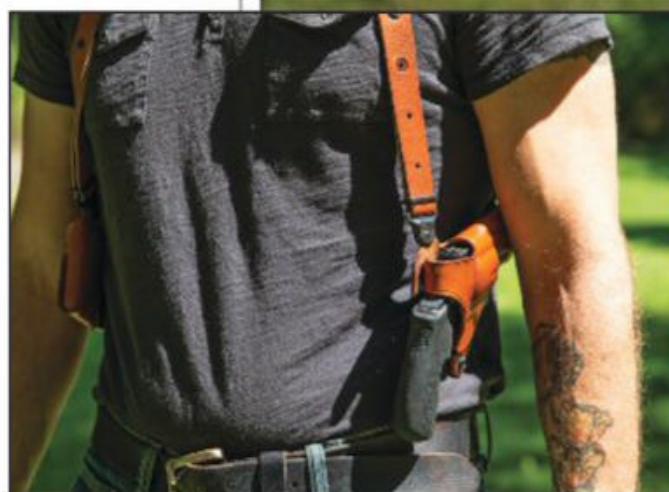
SNAKE SLAYERS

for deep concealment and a snag-free draw, the new LCRx line has an exposed hammer that allows the user to fire the revolver in single-action (SA) mode in addition to the DA method.

The LCRx line is offered in a variety of calibers, from .22 LR to .357 Magnum. The rimfire and .38 Special versions have monolithic aluminum frames, while the rest use stainless steel frames to handle the stress of higher-pressure cartridges. This construction does away with the typical sideplate, and instead the pistol is broken down into three modular subassemblies. All models have PVD-coated stainless steel cylinders and the frames are matte black.

Each LCRx has a steel barrel insert that's screwed into the monolithic frame, steel sights and a Hogue Tamer grip. The 3-inch-barreled versions utilize a longer grip for a better purchase. Internally, an electroless-nickel finish is applied to components like the hammer and trigger to add lubricity and minimize the amount of required maintenance. There's also a transfer-bar safety, so there's no need to carry the gun with the hammer resting on an empty chamber.

Looking closer at the 3-inch-barreled guns, the .38 Special LCRx weighs 15.7 ounces unloaded compared to the .357 Magnum's 21.3 ounces. At first blush, it would seem to make more sense to pick the .38 Special model as your dedicated snake gun since CCI's .38/.357 shotshells will work with either revolver. However, I opted for the heavier .357 Magnum model for two reasons. First, it's a more versatile



tool because it can use both calibers. Additionally, there are reports of the CCI shot cups jumping the crimp during recoil in very light revolvers. This can cause the cylinder to jam and requires some effort to remedy. So, I decided to avoid the issue entirely.

The Name's Bond

While a bit anachronistic, the Bond Arms Ranger II is both a powerful and versatile tool for the field, as it can use various barrel assemblies and calibers. Looking like a 'roided-up prop from the set of *Tombstone*, the Ranger II is a two-shot derringer offered in either .45 Colt/.410 or .357 Magnum/.38 Special. For this review, I opted for the former as well as an extra .357/.38 barrel assembly for a direct comparison to the Ruger LCRx.



Ruger offers a few LCRx revolvers, but the author decided to test a 3-inch-barreled model in .357 Magnum, which he paired with a Galco shoulder holster.

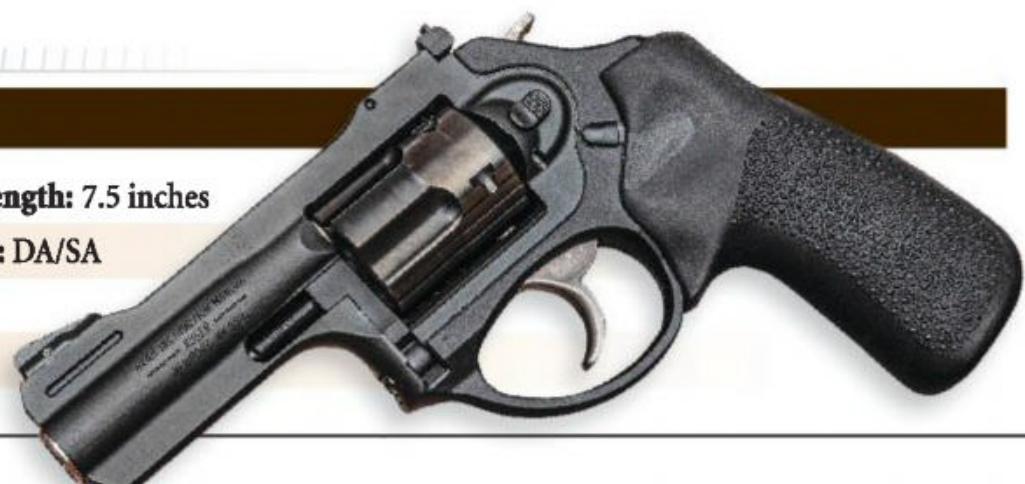
The Ranger II is a chunky handful of beautifully worked stainless steel that sports a black-ash grip adorned with a silver star for some Texas Ranger flair. In that vein, the 4.25-inch barrel assembly has an integral, old-timey front sight that isn't all that great by today's standards, but it stays true to the derringer's heritage. The main difference from the original Ranger is the inclusion of a removable triggerguard.

The Ranger II is an SA handgun, meaning that the hammer must be cocked before each shot. The bottom barrel lines up true with the sights, and the top barrel shoots a little high. The firing mechanism alternates between each barrel every time the pistol is cocked, and the user can tell which barrel will fire next by looking at the position of the little hammer head when the hammer is cocked.

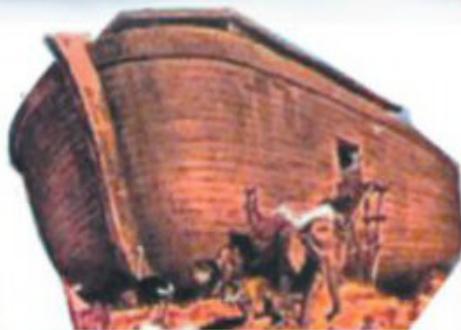
SPECIFICATIONS

RUGER LCRx

- **Caliber:** .357 Magnum/.38 Special • **Barrel:** 3 inches • **OA Length:** 7.5 inches
- **Weight:** 21.3 ounces (empty) • **Grips:** Hogue Tamer • **Action:** DA/SA
- **Sights:** Ramp front, adjustable rear • **Finish:** Matte black
- **Capacity:** 5 • **MSRP:** \$669



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Make no mistake: The Ranger II is not a tiny handgun. The grip is extra beefy to provide a better purchase. And despite its two-shot capacity, the Ranger II still weighs in at 23.5 ounces—almost the exact weight of an empty Glock 19.

To open the Ranger II, simply push the lever on the side down and swing the barrels up to load and unload the gun, then lock the barrels back into place. Despite its simplicity, the Ranger II includes a crossbolt safety and a rebounding and blocked hammer to prevent the derringer from firing unless the trigger is intentionally pulled.

One benefit of the Ranger II is that it will accept any barrel assembly manufactured by Bond Arms, and there are over 15 different calibers in various lengths. It takes about 30 seconds to swap out barrels, and the available calibers (.22 LR to .45 Colt) dramatically increase the little shooter's utility.

Snakes On A Range

As a nod to the ecological benefit of the creepy bastards, I did not go out of my way to find venomous snakes to kill to compare



iStock Photo
It's smart to carry a handgun in remote areas in case a rattlesnake threatens you, your loved ones or your furry companions.

the LCRx and the Ranger II. Instead, I invited a few friends over to the range to try out the snake-shooters and pattern the various loads we had on hand. We used some Birchwood Casey 10-inch E-Zee-C targets and shot both guns from 5 and 10 feet.

We started off with the .357/.38 accessory barrel for the Ranger II to compare it to the LCRx using the same exact CCI No. 9 shot load. Both guns shot fairly similar patterns at 10 feet, but the Ranger II had a

tighter pattern at 5 feet, with all but a few of the pellets staying inside the 6-inch ring. The LCRx wasn't too far off with its own pattern, and I would still feel quite comfortable using it on the trail.

The Ranger II's primary advantage was its ability to shoot both .45 Colt and .410 shotshells with its standard barrel assembly. CCI's .45 Colt shotshells hold 50-percent more shot than the .38/.357 loads while offering slightly more recoil, making the step up in volume definitely worth it in my opinion.

We also tried some No. 6 and No. 7.5 Hi-Brass .410 loads from Federal Premium in the Ranger II. The recoil from the No. 6 shells was moderately higher than the .45 Colt's, but it wasn't objectionable. There was a definite thump with the No. 7.5 shells in the Ranger II, though we didn't find the recoil sharp or painful, thanks to the gun's extra heft.

The larger No. 6 shot offered more energy and penetration, but the pattern was a little sparse at 10 feet and not that much better at 5 feet. However, inside of 5 feet, the No. 7.5 load was absolutely devastating across the entire 10-inch circle. At

SPECIFICATIONS

BOND ARMS RANGER II

- **Caliber:** .45 Colt/.410, .357 Magnum/.38 Special • **Barrels:** 4.25 inches
- **OA Length:** 6.25 inches • **Weight:** 23.5 ounces • **Grips:** Black ash
- **Action:** SA • **Sights:** Front blade, rear notch
- **Finish:** Brushed stainless • **Capacity:** 2 • **MSRP:** \$761



0.69 ounces, it offered twice the payload of the CCI .45 Colt shells while being 150-fps faster. For absolute obliteration on the first shot, the No. 7 loads were the way to go.

Pros & Cons

The trigger on the Ranger II is not especially intuitive because you have to push the hammer in more of a downward fashion than back to fire, though it quickly becomes second nature. Even so, the trigger broke crisply at a relatively light 3.93 pounds. With the LCRx, you have two trigger options. Both SA and DA pulls were extremely smooth, coming in at 3 and 6.5 pounds, respectively.

The LCRx had the edge because of its superb trigger, capacity and modern sights.

made it the superior choice with regard to power and payload, though it came at the price of stiffer recoil. With the Hogue Tamer grip on the LCRx, the soft-shooting .38 Special rounds from CCI were light on recoil and would be an excellent choice for recoil-sensitive shooters. Plus, the Ruger's lack of raw power as a snake gun was more than made up by its five-round capacity.

But if you're looking for sheer power

Though it doesn't have the capacity of the LCRx, the Ranger II can mete out justice in a defensive encounter just as well. We tried out Hornady's .410 Triple Defense load, which uses two .35-caliber balls and one .41-caliber FTX slug. Two shots from the Ranger II landed six projectiles into a 4.5-inch spread at 7 yards. For close-up work, that's tough to beat.

As the go-to weapon for "charming" serpents in your own neck of the woods, the Ranger II and LCRx both have distinct advantages. It

The Ranger II can accept any other barrel assembly from Bond Arms, and the company includes a handsome leather driving holster.



The rear sight was adjustable for windage and elevation, and the front sight had a white ramp for easier visibility. More importantly, while the Ranger II had a different point of impact between shots—depending on which barrel we used—every shot from the LCRx had the same point of impact because of its single barrel.

As a dedicated snake gun, the Ranger II's ability to shoot .45 Colt and .410 loads

in a defensive weapon against two-legged predators, the LCRx will still dole out some .357 Magnum heat in a heartbeat. You just have to deal with the stout recoil that comes with the lightweight frame. We settled for trying out some 135-grain +P Gold Dots, and I was able to shoot five rounds off-hand into a cluster less than an inch wide at 15 yards. And that was in DA mode! The trigger is just that good.

just depends on what factors are most important to you: capacity, power, recoil, versatility or ease of use. Either way, either choice is supremely suited for the task, and it won't be long before you have the ophidian devils on the run. ★

For More INFORMATION

Bond Arms: bondarms.com

Ruger: ruger.com

FULL-COURSE RATTLER



How to clean and cook a rattlesnake without damaging the skin

BY JILL J. EASTON

“Snake! Dad, it’s a big rattlesnake, and it looks like it swallowed an elephant!” Leslie hollered, running into the house. “Hurry, come kill it before it gets away!”

To say Leslie Moseley, my husband’s daughter, was excited would be a colossal understatement. Sure enough, the 4-foot reptile was coiled up waiting and had a big lump in its midsection—evidence of a recent meal. It was the serpent’s last.

Normally, we don’t kill snakes, but having a poisonous one living around two excitable boys and three dogs can quickly become a recipe for disaster. Rattlesnakes are generally mild mannered and prefer not to waste hard-to-produce venom on something they can’t eat. Often, venomous snakes will “dry bite” larger threats to make an escape. But we couldn’t take that chance, and Jim quickly dispatched the snake with a shot from his .22 pistol.

The animal was still wiggling when Leslie had a flash from her childhood. “Dad, when I was little and you killed a rattlesnake, you skinned it and cut it up, and we ate it. Then you dried the skin to hang on my wall. The boys would love to see how you do it.”

The die was cast. Leslie has her father wrapped around her little finger. In a few minutes, Jim was sharpening one of his skinning knives. This snake would soon be broken down into useful pieces.

■ Anatomy Lesson

“Snape, snape, snape, snape, snape,” two-year old Hank hollered. Hank is a rowdy young man of few but often repeated words. His mom’s enthusiasm had spilled over. From the moment his mother first pointed out the snake to him, Hank was an integral part of the entire adventure. Five-year-old Wyatt was more controlled, but he paid careful attention to every step of the process. Kids are naturally blood-thirsty, so neither boy showed any fear of the snake or disgust with the process.

“The best way to kill a snake is to hit it in the back of the head with a limber stick like a fishing rod,” Jim told the boys as he prepared to skin the snake. “But the pistol was handy, and I was worried about two very wiggly boys who might have gotten too close.”

After showing the boys how the curved, fold-down fangs worked, Jim cut off the rattler’s head and put it safely out of reach. A snake’s nerves don’t stop transmitting messages just because the snake is dead. As long as the head is still attached to the body, a dead snake can



It's a good idea to remove a snake's head before skinning it. Then use scissors to cut down the center of its belly, making sure to keep the scales from detaching or skewing. Next, carefully peel the skin back toward the snake's tail. After moving past the belly, which might still be full from the snake's last meal—in this case, a rabbit—the skin will easily peel away from the carcass.

still bite and deliver poison, and even a headless snake head can give a person a nasty bite. In short, be careful.

Burying is a good way to prevent problems with the head. We didn't do this since there were several nosy, digging dogs in the yard. We kept it out of reach of the dogs and kids and later burned it.

"Dead' snakes often don't stop moving for quite a while after the head is cut off," Jim explained to the boys, poking at the headless animal and watching it squirm. "Last year, we had a headless, skinned snake thrash around and try to strike, and we also had one that was still squirming when we tried to cook it whole." Snakes are relatively primitive animals, so their neurons keep firing long after most animals would call it quits.

■ Skinnin' Time

Since the boys wanted to save the snake skin, Jim used kitchen scissors to carefully cut the rattler down the center of its belly, making sure to keep the scales from getting detached or out of alignment. Normally he would have cut off the rattles at the same time, but since the skin was going to end up as a wall decoration, he left the rattles attached.

"The cut starts where the snake's head used to be and continues past the narrow part of the body," Jim explained. "Carefully peel the skin back towards the snake's tail. Once you get past where you stopped splitting the belly, it will peel off the carcass just like pulling off a sock."

Then Jim got to the big lump in the middle of the snake. He had to work the skin over the wide spot. "Lookie there," Jim said. "That rattler ate a rabbit, probably last night." We looked, and sure enough we could still see all the rabbit parts, including the skin, through the partly transparent walls of the snake's stomach. After a big meal like that, the snake probably wouldn't have eaten again for several weeks. Most of the time snakes live off smaller animals like mice and chipmunks, but this one had scored big.

When he got to the end of the snake where it tapered down to the rattles, Jim used a small, sharp blade to cut the skin

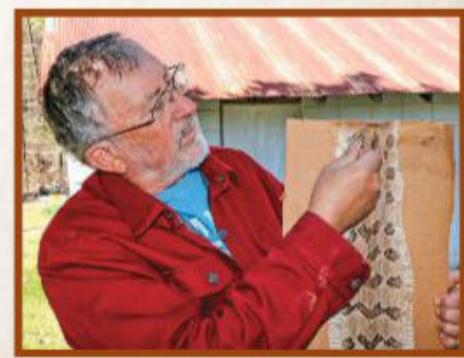
Saving A SNAKE SKIN

Snake skins are beautiful and can be made into a variety of items or mounted and displayed on a wall. Once the skin and body have parted ways, take the inside-out skin and cut down the center of the belly to the point where the skin and tail come together. Staying on the midline of the belly is easy since there's a thin red line on the inside of the skin to serve as a guide. When the belly cut is finished, lay the skin out on a flat piece of cardboard that's longer than the snakeskin.

Using your hands to smooth out the wrinkles, stretch the skin out flat and pull it lengthwise until the entire inside surface of the skin is in contact with the cardboard. The snake's body moisture will cause the skin to stick. No salt, borax or anything else is necessary to cure the skin. Simply lay another long piece of cardboard over the skin, tape the pieces together and lay them flat in a cool, dry place. It's a good idea to put a length of wooden board over the cardboard and weigh it down with a few rocks so mice won't chew on the cardboard and snake skin.

Let the skin dry and cure.

Two or three weeks is usually enough, but five to six weeks is safer. After it's completely dried, the skin will peel off the cardboard like parchment. Be careful when peeling or you might tear the skin. After it's separated from the cardboard, glue it to a board for a wall decoration, or do the same using an old belt to make a snakeskin belt or hatband. Use your imagination. —Jill J. Easton





on the lower side of the tail between the vent and the rattles. Then he carefully peeled the skin away from the tail base, using the knife to separate the skin from the meat and cut through the vertebrae at the base of the rattles. Finally, he turned the skin right side out, rolled it, put it in a bag and put it in the freezer. The boys planned to conscript their dad, Blake, to dry the skin when they got home and hang it on their wall, just like Mom had done as a little girl.

■ Meat Prep

Now it was time to prepare the meat for cooking. A skinned rattlesnake looks a lot like a very long canoe. The organs and digestive tract nestle inside the rib cage, and it's very easy to remove them. Jim grasped the snake's neck in his left hand, pinched the upper end of the windpipe and digestive canal with his

right, then pulled his hands apart. The innards came cleanly away, leaving a long, slender piece of clean, sweet-smelling white meat with a pair of ribs about every

has seen a snake skin up close. They won't believe I helped kill this big ol' snake."

With the wisdom of mothers the world over, Leslie said, "We'll see." ★



Fried Rattlesnake

Rattlesnake is a clean, fatless white meat that reminds me of frog legs, but most experts claim it tastes like fish or chicken depending on how it's cooked. The meat is tender, but there are lots of little bones. The only way we have ever cooked snake is to pan fry it, but there are a number of Chinese soup recipes that use snake. Here's a good one to try.

Ingredients

- 1 rattlesnake at least 4 feet long, cut into 4-inch pieces
- 1 cup flour
- 1 Tbsp. Cavender's Greek Seasoning
- ½ stick of butter



Directions

Mix the flour and seasonings in a quart-sized bag and dredge the snake pieces until they are coated. When the butter is bubbling in your frying pan, add a few snake pieces at a time. As they turn golden brown, flip them, and then let them drain and cool.

Eating snake is more a matter of sucking and sliding the succulent flesh off the delicate bones than chomping down. Enjoy! —Jill J. Easton



After the snake's skin and ribs are removed, it's just a matter of cleaning the meat and cutting it into smaller pieces for cooking.

quarter-inch of the entire length.

The final step was to cut the snake into pieces about 4 to 6 inches long. The pieces went into another baggie for freezing until we were ready to enjoy a rattlesnake hors d'oeuvre.

"When it's dry, can I take it to show and tell at school?" Wyatt begged. "I bet no one at my school

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Discover the satisfaction of bringing home your own frog legs for dinner

FROG FEVER



BY JOHN E. PHILLIPS

AT fine dining restaurants, you might see frog legs listed as one of the most expensive dishes on the menu. However, when you feel the craving for a plate of frog legs, you don't need to head into the wilderness to gig a mess of frogs—a common food in southern China since the first century A.D. and one highly valued by the Aztecs. You can visit nearby ponds, streams and rivers and gig your main course for free. Or, if you live in Louisiana, you can grab frogs by hand, the preferred method there. Most states

don't have a limit on frogs, but in some places, you'll need a fishing license.

Man's fascination with frogs is just as great today as it was in medieval Europe when frogs were added to witches' brews due to their supposed magical properties. At that time, people believed that magic made frogs disappear during the winter and miraculously return in the spring.

Back To School

For centuries, men have sought to understand the mystical behavior of the large Ranidae frog family, which

includes over 600 species and inhabits every continent except Antarctica, with 80 species in the U.S. Through observation and study, many frog giggers have learned the life cycle of frogs in their areas and then brought this tasty white meat to their kitchen tables.

A world-champion frog hunter who caught more than 600 wild frogs in a single night, the late Bill Chappell of Munford, Alabama, researched where and when frogs would appear. After inventing the automatic frog gigger to ensure success on almost every trip,



Rhett Kirby Photo



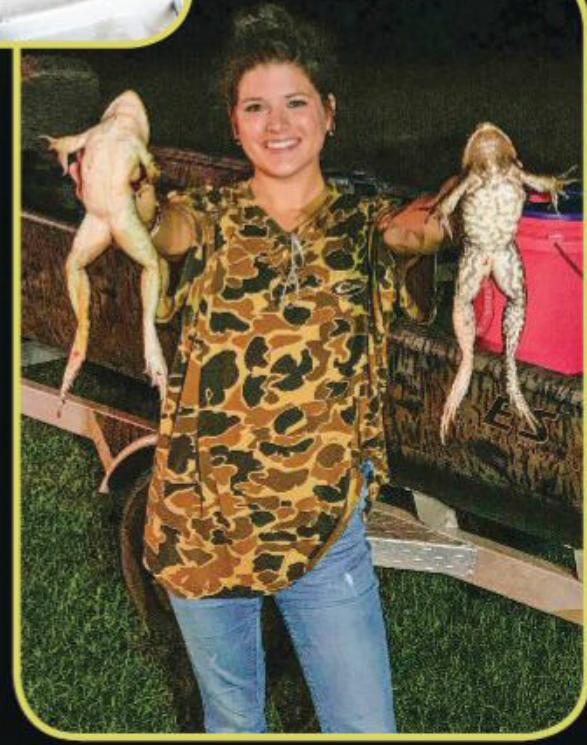
These large bullfrogs will provide a meal fit for a king or queen if they're prepared properly.

Chappell explained, "Knowing the frogs' migration pattern and taking the time to listen for their calling prior to a frog hunt can help you accurately predict the success of your hunt."

Frogs hibernate on the bottoms of ponds from November to March in most parts of the country, buried in mud and barely breathing. Then, around the first week of April, they come up from the mud and set up residency on the banks of small waters, stuffing themselves with earthworms, snails, crayfish, spiders, small fish,

snakes, turtles, birds, mice, small mammals, insects (including ants and wasps), tadpoles and other frogs. As the weather warms up, these amphibians move to small streams to spend the summer. At the first temperature drop in the fall, they migrate back to nearby ponds to prepare for their long winter's sleep.

Chappell specialized in hunting frogs in free-flowing streams and near ponds in country clubs, golf courses and subdivisions. My own enthusiasm for frog gigging started many years ago when I had the good fortune to learn the sport



Helen Howard Photo

from Chappell. Conventional frog gigs like the push-pole ones traditionally had problems. Froggers couldn't put enough force into these gigs to stick free-floating frogs or those on lily pads. If someone attempted to take a frog sitting on a rock, log or gravel point, he almost always bent or dulled his gig. If two frogs were sitting close on the bank, as they often would during mating season, the frogger generally could only take one.

But Chappell remedied all these problems with his invention of the automatic frog gigger in 1964, an approximately 8-foot-long aluminum pole that was built in two parts so the second part could slide backward and forward. The front part of the gig was powered by two surgical rubber tubes. The gig was shot by touching a trigger on the top of the device to propel a four-pronged, 6- to 8-inch-long gig head forward 18 inches with amazing speed and force. Chappell could gig free-floating frogs, those on structures and a second frog when two were sitting side by side.

Pick A Spot

In the early spring, the most productive places to locate frogs are in ponds



Mike Bolton Photos



If you wade through a creek or stream in search of frogs, make sure you're wearing sturdy shoes to protect your feet.

near flowing streams and in overlooked waterways. Throughout most of the summer, the best frogging will be done along flowing streams and rivers or in ponds close to moving water. I always suggest

that anyone who may be interested in frog gigging should look at a printed map of his state, identify the blue lines on the map denoting small creeks and rivers and focus on checking them out for frogs.

Remember that frogs are very sensitive to hunting pressure. After a stream or a pond has been gigged three or four times in a two-week period, the frogs become wary of light and noise. Don't frog hunt a particular body of water more than once a week.

Recipe:

Sweet & Sour Frog Legs



Ingredients

- 1½ pounds frog legs, cut into 1-inch chunks
- ½ cup cornstarch
- 2 eggs, beaten
- ¼ cup flour
- canola oil for frying
- 1 cup pineapple chunks
- 1 red and 1 green bell pepper, cut into 1-inch chunks
- ½ cup yellow onion, chopped
- ½ cup each of sugar and apple cider vinegar
- ¼ cup brown sugar
- 1/3 cup ketchup
- 4 tsp. soy sauce
- 2 cloves garlic, minced

Directions

Whisk together the sugar, brown sugar, apple cider vinegar, ketchup, soy sauce and garlic to create the sauce. Pour canola oil 1½ inches deep into a Dutch oven or a frying pan. Heat the oil on medium-high heat. You want the frog legs to cook and brown in about two to three minutes.

Place the cornstarch in a large Ziploc bag, add the frog legs and shake to coat. Dip the pieces in the beaten eggs and then into the flour before adding to the hot oil. Cook the frog legs for two to three minutes and remove. Save 1 tablespoon of the oil.

Add the bell peppers, onion and pineapple and cook for one to two minutes until they're crisp and tender. Add the sauce and stir to coat the pieces, then cook for 30 seconds. Add the frog legs and stir until the sauce has thickened. Serve with fried rice.



On The Hunt

There are four common methods for getting about while hunting for frogs. The first option is wading, which I prefer for small streams. The bottoms of streams may feature sharp rocks, bottles and cans, so tennis shoes are a must. Use a small headlamp to spot a frog's eyes, which will shine like two reflective mirrors on the bank.

If the stream is too deep to wade, I prefer using my Old Town canoe or a kayak due to their easy maneuverability and relative silence. The canoe and kayak also provide places to store a sack full of frogs and an ice chest with drinks. The key to gigging frogs from a canoe is to have a highly experienced paddler in the stern of the craft to keep it from capsizing.

You can also use a flat-bottomed johnboat with an electric motor for gigging expeditions. Often, froggers will utilize

their big motors on major reservoirs to reach small streams and sloughs infested with frogs. Then, once they reach these regions, they put their trolling motors into the water to power the boats down the bank. A common problem associated with electric-trolling-motor frog gigging is that the motor's shaft may get stuck in the mud when you head the johnboat into the bank to make the gig. I suggest that once a frog is spotted, you pull the electric motor up and use a sculling paddle to move in close to the croaker. Also, with the popularity of bowfishing, many fishermen have their

Recipe:

The Best Fried Frog Legs



Ingredients

- 2 pounds frog-leg pieces
- vegetable oil
- 1½ cups flour
- 1 Tbsp. salt
- ½ Tbsp. black pepper
- ½ Tbsp. garlic powder
- ½ Tbsp. onion powder
- ½ tsp. cayenne pepper
- 1 cup buttermilk

Directions

Preheat oil in a frying pan or deep fryer to 325 degrees Fahrenheit. Combine all of the dry ingredients in one bowl and pour the buttermilk into another bowl large enough to immerse the frog legs. Dust the frog legs with the flour mixture, dip them in the buttermilk until coated, and then very thoroughly coat them in the flour mixture. Cook the frog legs in hot oil, then remove them and let the excess oil drain off.



boats set up with lights around the fronts and platforms from which you can gig.

At Florida's Crystal River, we gigged frogs from an airboat. Just below my seat was an 8-inch-wide, 6-foot-long PVC pipe going to a large burlap bag attached to the other end of the pipe. As soon as a frog was gigged, I pulled the frog into the boat, detached it from the gig head and put the frog into the PVC pipe, so it could rapidly descend into the bag. Combining our catch, the air-

boat driver and I took over 100 frogs with regular frog gigs in three hours.

So, I encourage you to catch frog fever and enjoy this outdoor sport that provides both an adventure and delicious food. ★



Flashlights and headlamps can help you find frogs at night, since their eyes are reflective. Also pack along a good frog gig and something to carry your prey in.



Rhett Kirby Photo

TRAPS THROUGH TIME

**Charting the history
of old designs can
help us appreciate
how far they've come**

BY CODY ASSMANN

All craftsmen have tools that help them do their jobs better. Painters use quality paint-brushes, rollers and air brushes to get clean and smooth coats. Mechanics and carpenters have shops full of tools for every job imaginable. Farmers and gardeners collect specialty implements to make planting, cultivating and harvesting crops easier.

Of course, the tools we use today weren't dreamt of overnight. They're improvements upon countless designs from the past. Some of our modern tools have become almost unrecognizable from their ancient cousins, but others we use today are the spitting images of tools used by older generations. One of these implements that comes with an interesting story is the chief tool of trappers: the steel trap.

Today's steel traps are highly effective in achieving their purpose of holding animals. Manufacturers have devised traps that last for years on end and are adequate enough to hold any animal with as little trauma as possible. Although our modern traps may differ in some ways from traps of old, some features haven't changed that much.

The First Designs

While written records of traps go back to the early 1300s, there are no actual diagrams of a trap until much later.



**"Green River
Trapper"**
By David Wright

The oldest diagram of a trap dates to the late 16th century. In 1590, a European agriculturalist known as L. Mascall drew a diagram of an iron trap from his day. The trap would likely be considered cruel and crude by our modern standards. It employed the use of steel spikes on the jaws, likely under the perception that they would generate more holding power. Not only that, but the trap featured an upright pin in the center of the pan that Mascall explained was for skewering bait. The idea was that whether the animal stepped on the trap or bit at the bait, it could be caught either by the foot or the head.

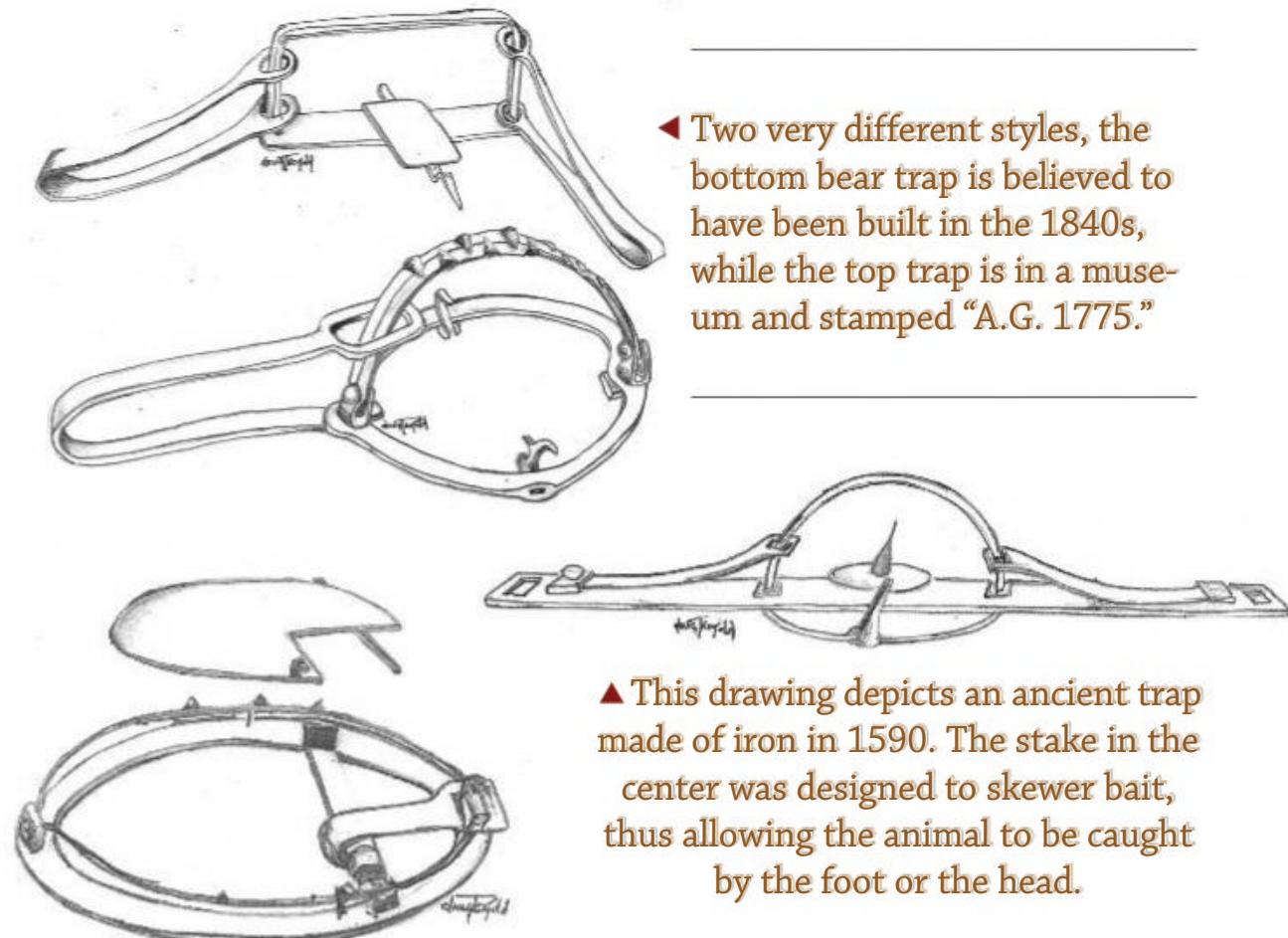
Although this trap may appear crude to us now, it actually shows a high level of sophistication: The entire system is fairly complex. Two springs sitting upon a metal base form the foundation of the trap. Each jaw is restrained by a dog (clicket) located at the center of the jaw when spread. The pan is pliable and holds the pan post.

While the trap is recorded as being made of iron, it used steel springs for increased power. This historical design was also a jump trap, meaning that it sprung off the ground when set. Many believed that this style of trap helped to get a better hold on the target animals.

The Mascall trap has numerous moving parts and double steel springs, and it allows for multiple methods of catch. It would be hard to believe that this trap is the oldest trap ever designed and recorded. Despite its medieval features, the astute eye can visualize a modern double long-spring trap within this old device.

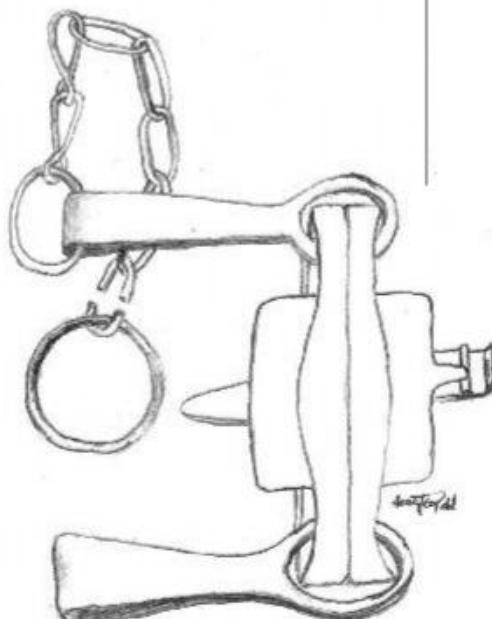
Coming To America

As Europeans moved to America, they soon realized that steel traps could be employed to catch valuable fur. In his book *Firearms, Traps, and Tools of the Mountain Men*, author and historian Carl P. Russell postulates that steel traps might have been in use in America by the early 1600s. The oldest known reference to an actual steel trap in America—found in the inventory of Thomas Trusler's properties in Salem, Massachusetts—was in the 1650s. As is the case with most mysteries of history, it is likely that these were not the first steel traps to make their way to North America. As the fur trade heated

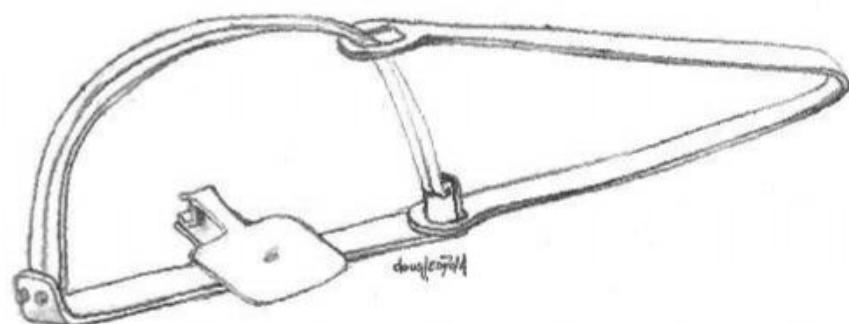


► Two very different styles, the bottom bear trap is believed to have been built in the 1840s, while the top trap is in a museum and stamped "A.G. 1775."

▲ A seasoned trapper will appreciate this 18th-century French trap. It's a predecessor of our modern coil-spring designs.

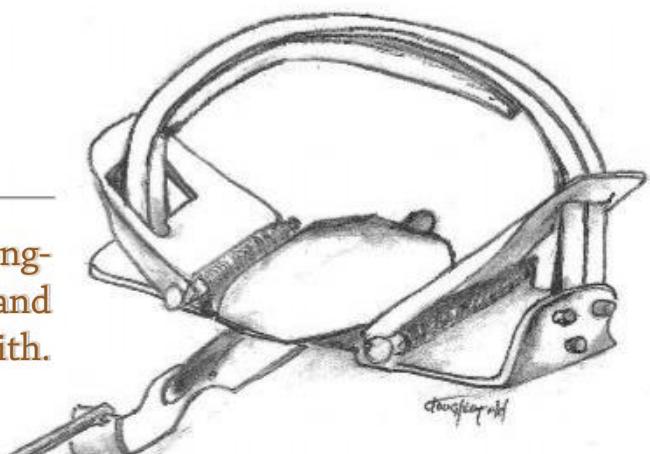


► This is an example of a double long-spring trap ordered in the 1800s and made by an American blacksmith.



▲ Jim Bridger once owned a single-spring trap like this one. It was designed as a beaver trap similar to modern traps. One interesting note is the absence of a dog.

► This modern coil-spring trap started gaining popularity in the early 1900s, but its roots go back to the 18th century.



up, traps slowly spread across the North American continent. Records in the early 1700s show the tools being quite common.

In the 1770s, longhunters like Daniel Boone would have carried steel traps on their expeditions. By 1797, David Thompson, the famous Canadian explorer, recorded that steel traps were being widely used in the area of present-day Manitoba. It should be of no surprise that in 1804, while wintering at Fort Mandan, Lewis and Clark were given two steel traps by a Mandan chief. These traps were reportedly being returned after their theft from a Frenchman.

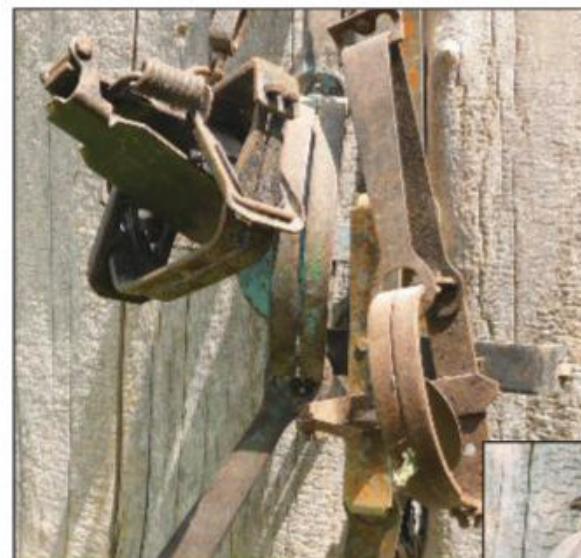
As people experimented more and more with traps, innumerable designs were tried. And as folks trapped with different styles, trappers discovered what worked and what didn't. Eventually, many traps began to resemble our modern long-spring models. Although there are also historical examples of coil-spring traps dating to the 1700s, they seem to have been largely experimental.

Booming Business

Although effective trap designs were figured out by the late 1700s, blacksmiths had not yet mastered crafting them. In fact, the big fur companies of the 1800s faced no small difficulty in obtaining working traps. Fortunately, there are several examples of trap suppliers (i.e., fur companies, Native American traders) explaining to their blacksmiths how the trap needed to work. As one letter describes, "Tell [the blacksmith] that the Beaver Trap, when set, the jaws should be open and flat."

Another letter from 1808 states, "The maker could not have tried it by the only test to set it and spring it. I have tried to set it three times. Neither time did it spring when the plate fell. It not only creeps, but hangs."

Due to the unskilled production of traps by blacksmiths and fortunes at stake in the fur trade, it's little wonder that the 19th century was one of improvement upon the steel trap. Some trappers, like Jim Bridger, took it upon themselves to build their own traps. In other cases, large fur companies hired specialized blacksmiths to work at their trading posts. The 19th century also saw the rise of the first real entrepreneurs of the trapping industry. Private individuals like Sewell



These modern traps—the single long spring, double long spring and coil spring—haven't changed much from traps of the past.

Newhouse began to fill the need for quality traps. Newhouse and his Oneida community created what would eventually become the famous Oneida animal trap.

At the beginning of the 1800s, trappers had figured out the trap design that worked best. By the end of the century, their traps were seeing craftsmanship that we might approve of today.

The Conibear's Rise

At the dawn of the 20th century, the book on steel traps wasn't closed by any means. As people continued to trap for a living, they continued to tinker with their traps. Eventually, one trapper, Frank Conibear, designed a trap that took a radically different approach.

After his birth in London, Conibear's parents moved the family to Canada. His life's path eventually landed him in the wild North Country, and it was there that he learned the ancient art of trapping. Although he instantly took to the craft, he wasn't necessarily satisfied with the status quo. By his early 20s, he was frustrated by losing animals to pull-outs. He also thought traps could be more humane. The problem was the length of time that some trappers went between checks. Conibear believed that creating a trap capable of dispatching an animal on the spot would not only save fur but improve the practice overall, so he committed himself to creat-

ing a trap that killed animals instantly.

Over the course of the next few decades, Conibear fiddled with different trap models. Some showed promise but were too cumbersome, and some simply failed. Even after an injury forced him to quit trapping full time, he still believed in his idea. It wasn't until 1955 that Conibear was able to produce the first functional models of what would become the well-

known body-grip trap of today. After 26 years, Conibear had finally created the trap he envisioned so many years prior.

Frank Conibear's trap earned him widespread appreciation from many people in the 1960s. In fact, various foundations were

so impressed with this humane trap that Conibear was awarded a certificate of merit by none other than the American Humane Association. Today, body-gripping traps (aka Conibears) have gained general support and are used extensively by trappers.

As you can tell, our modern traps are the products of hundreds of years of experimentation. Although traps like the recent dog-proof traps are an exception, most modern traps aren't that far removed from the first basic design. Over the centuries, we've weeded out countless bad ideas and improved upon the good ones. We not only have traps that hold animals more securely, but we also have traps that cause them little harm.

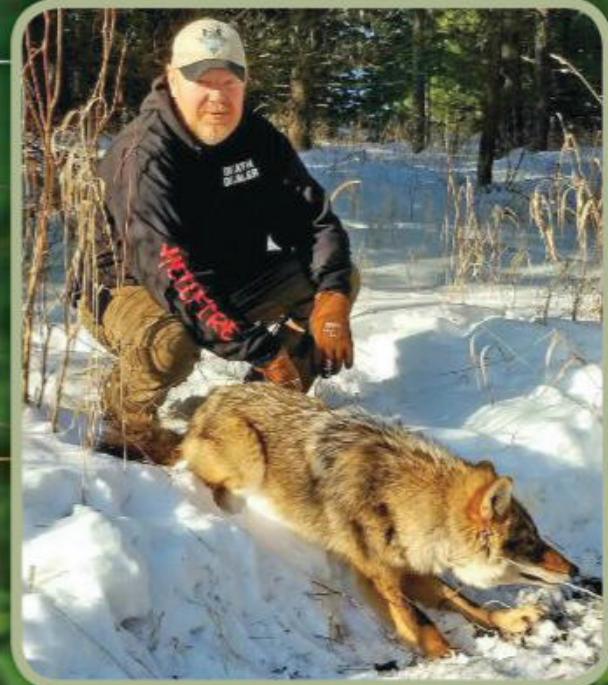
Modern trappers aren't that different from trappers of the past, either. We want traps that function well and help us do our work better. We want traps that hold animals and do it in the most humane way possible. Craftsman of all walks are constantly improving upon the design and function of their tools. Steel traps are no different, and neither are trappers. By better understanding where they came from and their history, hopefully you can better understand steel traps, the tools of a trapper. 



TO CATCH A COYOTE

Accomplished trapper Jeff Dunlap shares his secrets and strategies

BY RICHARD P. SMITH



Jeff Dunlap from Herron, Michigan, is one of the best coyote trappers in the country, so it's no wonder that he was selected to put on a demonstration about catching these wily predators at the Upper Peninsula (UP) Trappers Convention in Escanaba, Michigan, last July. Jeff said he catches between 50 and 100 coyotes per year, which is excellent considering these furbearers are among the most difficult to catch consistently.

"They are the toughest animals to catch, especially in big timber," Jeff said. "They are spooky by nature because many people shoot them on sight."

That's one of the reasons they are wary, but they have super senses, too. They're on edge all of the time. They also have larger home ranges than most other animals, especially in big timber."

Jeff traps coyotes in a number of states besides Michigan, which is one of the reasons he believes the task has a lot of contradictions. "If I'm shooting a video in Louisiana, for example, and caught a coyote," Jeff said, "I would tell the viewers to reset the trap in the catch circle to try for another one. In Louisiana, coyotes won't hesitate to enter the area where another coyote was caught. In Michigan, I would never

recommend resetting a trap where another coyote was caught. Coyotes in Michigan will avoid areas where other coyotes were trapped."

So, what works in one area may not work at all in another. Hence, Jeff recommends that coyote trappers keep good records whether they spend all of their time trapping in one region, one state or a number of states. Trappers should keep a log of what types of lures, baits and traps they use. This will help you determine what works best to increase your success.

Jeff uses #3 leghold traps most often for coyote trapping, with Bridger #2s

TO CATCH A COYOTE

as the minimum. He commented that he has more of a tendency to use #2s where the odds of catching non-target animals like domestic dogs are highest. It's easier to release non-target animals unharmed from the smaller traps.

Bag It & Tag It

Jeff carries a "predator bag" with him that contains most of the tools he needs. The bag has pockets on the outside that carry his lures and baits—usually three or four types of lures and a couple of types of baits.

Jeff packs a sifter for placing dirt or snow over sets as well as power auger to make dirt-hole sets. But the most versatile tool Jeff carries is a Freedom Brand hammer. One side of the hammer is used to pound in stakes, and Jeff uses the claw on the backside to dig beds for his traps in the ground and on the ice.

A whiskbroom helps Jeff blend his sets in with their surroundings. He wears gloves when making sets, too, to minimize his scent. He also crumples up pieces of wax paper to cover the pans. Finally, he uses long stakes to secure traps where they're set and disposable Wolf Fang stakes for other purposes. When trapping in cold weather, Jeff also packs antifreeze flakes to prevent his sets from freezing.

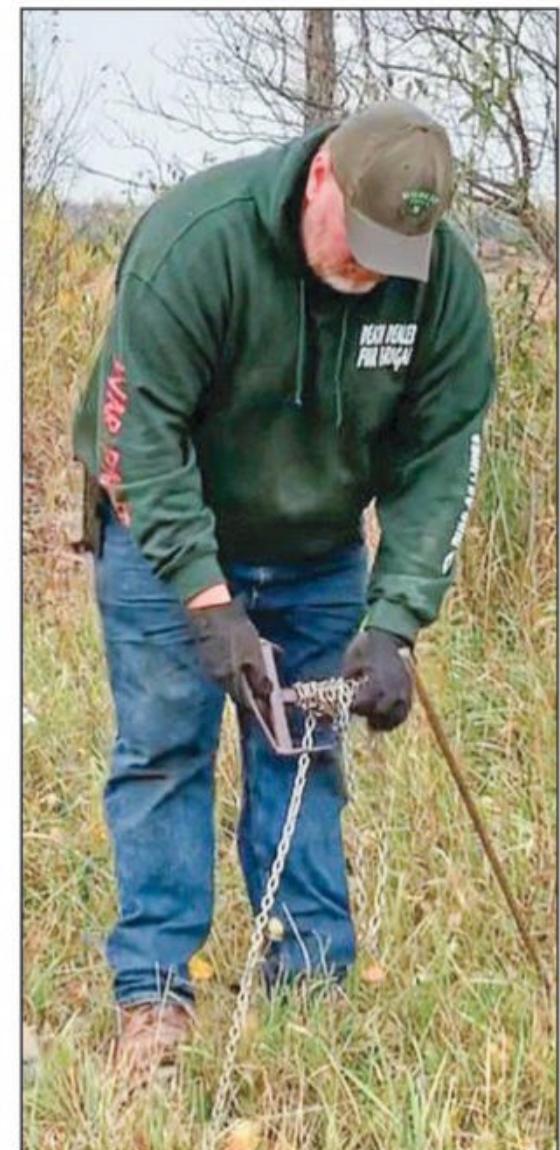
Drag Tactics

Staking traps isn't always necessary. Jeff only stakes traps in place to hold coyotes where there's little to no traffic and he's not worried about somebody stealing or shooting the animal. When there's a lot of traffic on public land or even private property, Jeff normally uses Saber-Tooth drags so that trapped coyotes can make it into the brush where they'll be out of sight. Drags also help maintain the location's integrity so you can quickly reset traps.

After reaching a set where a coyote was caught in a trap attached to a drag, Jeff said that he often locates the coyote by listening for the sound of the chain rattling. Trapped coyotes normally try to



Dunlap uses antifreeze flakes to keep his sets from freezing in cold weather.



Jeff Dunlap prepares a dirt-hole set using a Saber-Tooth drag with a 10-foot chain so a trapped coyote can make it to cover and remain out of sight until he returns.

move farther away when someone arrives on the scene, and while they're moving, the chain makes noise. The drags that Jeff uses normally leave drag marks across the ground that can be followed if there's no noise from the chain.

He usually attaches the drag to 10 feet of chain under the trap. If it's not possible to bury a drag and chain under a trap, Jeff covers them off to the side with dirt and leaves so they blend into the natural environment.

One of the circumstances where Jeff does not place the drag and chain under the trap is when he wants to control which direction a trapped coyote moves after being trapped.

To accomplish this, he pounds a metal rod into the ground at an angle, about 8 feet from the trap, and pointing in the direction he wants the coyote to move in. The veteran trapper then hooks the drag on the base of the rod. After a coyote is trapped, it'll only be able to move in the direction the rod is pointed.

If there's snow on the ground, Jeff will attach 2- to 2.5-foot-long zip ties to the drags. These zip ties—usually black—stick up in the air when a drag remains where it was set. On private property, Jeff often attaches pink or orange ribbon to the zip ties. When Jeff checks a set where a zip tie isn't visible, he knows he's made a catch and starts looking for where the trapped animal ended up.

Sets, Lures & More

The dirt-hole set is one of the most popular options for catching coyotes. These sets normally involve a single hole in the

ground with bait placed in the bottom of the hole and a trap placed in front where a coyote is most likely to step on it. Jeff came up with a variation that has worked well for him called the double dirt-hole set, which involves two dirt holes and two traps near one another.

Whether making one or two holes in the ground, Jeff uses his auger to drill holes 14 to 18 inches deep into the ground at an angle. He then employs a T-handle rod to push a tablespoon of bait to the bottom of the holes. The primary baits he uses for coyote trapping are made from muskrat; Jeff's father developed these back in 1969. One type of bait goes by the name Soul Taker and the other is Rage.

Dunlap Lures, the company that Jeff's father started and Jeff continues to operate, also produces a line of lures for attracting coyotes. These are the lures that Jeff uses to attract coyotes to his sets, but he said there are plenty of other baits and lures on the market. He doesn't sell his company's baits and lures directly to the public, except at shows where he mans a

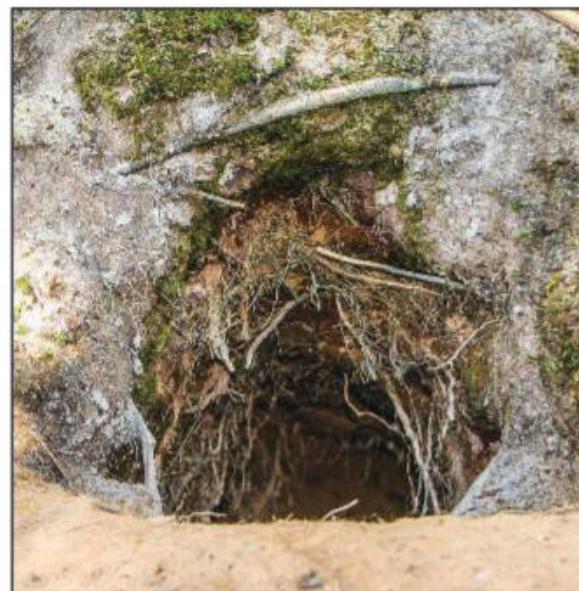


Coyotes are tough to trap due to their keen senses, but consider placing traps near den sites (above right) for better results.

booth. He primarily sells his products to dealers who then sell them to the public.

Any sandy location where there are coyote signs is a good place for a dirt-hole set. Jeff keys in on logging roads and trails, old den sites, gravel pits, berms used to close logging roads to vehicles, edges of agricultural fields, beaver ponds and lakes. Frozen beaver ponds, lakes and rivers can be great places to trap coyotes during the winter, too, along with logging roads and gravel pits.

Finally, Jeff does a lot of state-hopping to trap coyotes. His advice to others interested

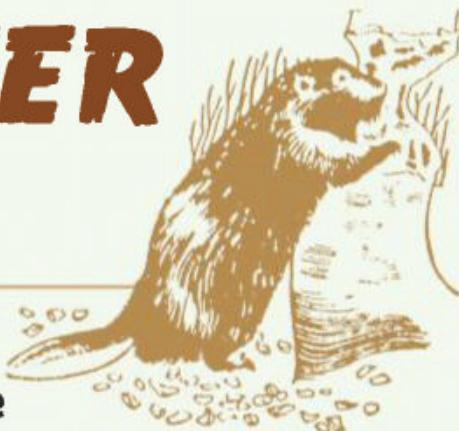


“Staking traps isn't always necessary. Jeff only stakes traps in place to hold coyotes where there's little to no traffic...”

in this pursuit is to check local trapping regulations carefully, especially as they pertain to nonresidents. Leghold traps are prohibited in some western states, for instance. Some states also have different trapping season dates for nonresidents versus residents. Trapping licenses are usually more expensive for nonresidents, too. Jeff said that you can pinpoint potential trapping locations on maps ahead of time. He suggested keeping phone numbers for local agency offices handy in case you need to call them. And if you plan on trapping down South, Jeff said to take a freezer with you. ★

PERFECT BEAVER PROCESSING

Use Mike Kain's masterful tips and tricks to get the most out of your take



BY RICHARD P. SMITH

Mike Kain from Coral, Michigan, knows a thing or two about skinning and processing beaver hides. Over the past 20 years, Mike estimates that he's skinned and handled approximately 10,000 beavers. As a personal record, he's skinned close to 30 beavers in a single day.

Mike's experience in skinning, fleshing and stretching beaver pelts is why he was selected to put on a demonstration covering these topics at the Upper Peninsula (UP) Trappers Convention in Escanaba, Michigan, during July of 2019. Any trapper can benefit from his advice. If you're still

using nails to fasten beaver hides to drying boards, for example, Mike has a better alternative.

► Skinning

Before starting to skin a beaver, Mike removes all four of its feet with loppers. If you don't have those, the feet can be chopped off with a sharp hatchet or knife. Simply cut through the wrist and ankle joints at or near the hairline. Some trappers who skin beavers on a flat surface or on the ground remove the tail as well before skinning. Either a hatchet or a knife works well for this endeavor.

Once the feet and tail are

removed, the skinning begins. Mike uses a knife specifically designed for the task called a beaver knife. A specialized beaver knife isn't necessary, though. Any sharp knife will work.

At his demonstration, Mike laid the beaver on a table, positioning the animal on its back with its tail toward him. He started a cut above the castors (near the rear) that went along the center of the body from back to front as far as the chin or lower lip. He then used his knife to separate the skin from the carcass from one side and then the other. Mike rolled the beaver from one



Mike Kain (right), who has skinned and prepared over 10,000 beavers, shows trappers what a finished pelt should look like at the UP Trappers Convention.



side to the other as he separated the hide from the carcass with his knife. Some of the time, he reversed the carcass' positioning so the head was facing him to make it easier to skin various areas.

When skinning beavers at home, Mike said he hangs them by the tail with a hook to hold them in place. On

hanging beavers, he makes a skin-deep cut from the base of the tail to the chin. Then, he separates the skin from the carcass around the base of the tail. Once there's a loose flap of skin near the base of the tail, that flap can be gripped by hand to pull the hide down as the knife is used to separate more skin from the carcass.

Peeling the pelt from the carcass in this manner usually goes much faster than on a beaver that's lying on a table or the ground.

Be careful when you're skinning around the legs to avoid cutting the hide. But the most care is required when you're skinning the head. The skin around the ears and eyes

should be removed as close to the skull as possible.

As you'd expect, the process of skinning a beaver becomes easier after you've skinned several. Experienced beaver skinners can remove the hide from beavers in as little as three minutes. Mike said that spring beavers can be harder to skin than those trapped or snared

PERFECT BEAVER PROCESSING



during the fall and winter. Spring beavers also tend to have bite marks on them from fighting, so take care when encountering these potential holes in hides to avoid making them larger. Finally, when properly skinned, beaver pelts are circular in shape.

► **Fleshing**

Once beavers are skinned, the hides need to be fleshed to remove meat and fat before they can be dried. Mike drapes the hides over a fleshing beam, then he uses a Necker 600 fleshing knife to get the job done. During the fleshing process, he wears a rubber apron to protect his clothes.



After removing the beaver's feet with loppers, Kain then uses a knife to remove the animal's skin from back to front.

"It's important to keep hides tight on fleshing beams," Mike said. "If there's slack in the hide, it's easy to cut it. For best results, keep fleshing knives sharp. Try not to flesh beaver hides when they are wet, either. Use a leaf blower to dry

beaver hides before fleshing them."

Fleshing knives have sharp sides and dull sides. Mike uses the sharp side to do most of the fleshing on beaver pelts, pushing the blade downward on the pelt as it's draped over the beam to separate the meat and fat from the hide. He removes a continuous string of flesh from the hide from top to bottom, using multiple strokes with the knife. He normally switches to the dull side of the fleshing knife when he comes to the legs to avoid cutting the hide at those locations. When fleshing hides from female beavers, he recommends being careful around the nipples as well, because it can be easy to cut holes in their hides in those places.

Mike constantly repositions the beaver hide on the fleshing beam as he goes until the process is complete. It takes him about 10 minutes to flesh an entire beaver pelt. If you don't have a fleshing beam, a fence post or a fallen tree with a properly placed limb can be used as a substitute. Some trappers simply drape the beaver hides over their knees while wearing an apron or canvas pants, and they'll use long, curved-blade knives. Beaver knives can also be used for fleshing.

► **Stretching**

After beaver hides are fleshed, the next step is stretching them to dry. Mike uses 7/16-inch plywood or wafer board that measures 48 by 32 inches to stretch his beaver pelts on. Some trappers use 5/8 or 3/4-inch plywood for drying beaver hides.

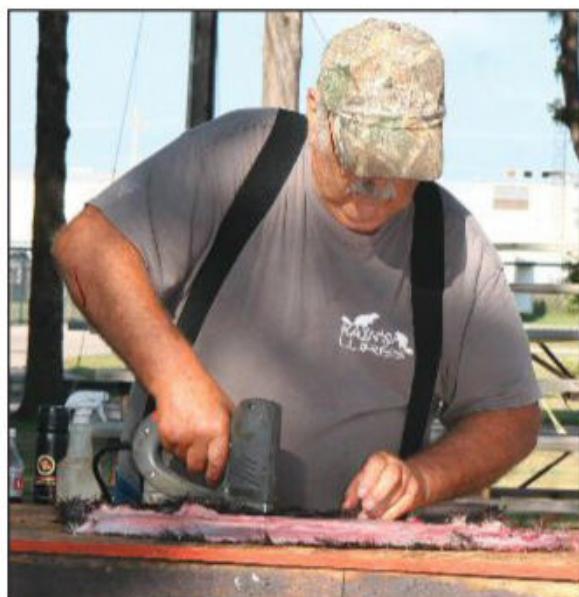
One 4-by-8-foot sheet of plywood will

When it comes to fleshing, Kain uses a Necker 600 knife to get the job done. Make sure you keep the hide tight and dry, too.



make three stretchers capable of drying six pelts if both sides of the boards are used. A plywood sheet of that size can be cut into three stretchers that are 32 inches wide. An option is to cut two that are 34 inches wide and one 28 inches wide. Hides from smaller beavers would fit on the 28-inch board, and larger pelts would fit on the 34-inch stretchers.

Beavers come in various sizes, from kits or cubs to super blankets, and circles should be traced on drying boards to conform to those sizes. Those circles will serve as guides when attaching hides to stretchers. North American Fur Auctions (NAFA) have templates available for tracing circles on stretching boards that conform to many different sizes of beaver, from under 42 inches to over 68 inches. The templates are one-quarter of the shape of beaver pelts,



Kain uses 9/16-inch staples to attach beaver hides to stretching boards because they're easier to remove later than nails.



Combs and brushes are just as important to Kain as skinning and fleshing knives.

so the lines on the template must be traced in four different locations on a stretching board to make full circles.

NAFA suggests drawing a cross with a pen or pencil in the center of the stretching board to serve as a guide for using the template in each quadrant. Felt-tipped pens are not recommended for tracing lines because their ink often smears. NAFA has offices in Stoughton, Wisconsin; Winnipeg, Manitoba; and Etobicoke, Ontario. If you need a beaver stretching template, contact the office closest to you.

After beaver pelts have been fleshed, they can be attached to stretching boards skin-side up. Select the circle on the board that most closely matches the size of the hide you want to dry and use that circle as a guide for fastening the skin to the board. Mike recommends starting to fasten the hide to the board where the beaver's nose was. Instead of nails, Mike uses 9/16-inch staples to attach hides to boards. Compared to nails, staples are a cheaper and more efficient way to fasten beaver pelts to stretching boards. Mike uses an Arrow T50 staple gun for that purpose, but a variety of other brands and models should also work.

Mike puts a staple in every inch around the circle that the hide is being attached to, pulling the skin tight before stapling it to the board. He said that one box of staples that he buys at Menards is good for stapling 10 beavers to stretching boards. When he gets to the area where the hind legs were, he stops and uses needle-nose pliers to pull the hide tight

where the tail was and resumes stapling from the rear until the entire pelt is stapled down. The skin from all four feet is also stapled to the stretching board. Mike said he sometimes cuts some of the skin from the front legs before stapling them.

► **Drying**

Mike has a drying room with a fan that is kept at 70 degrees Fahrenheit, and that's where he puts the beaver hides after they're stapled to stretching boards.

Mike said that it takes about a week for beaver pelts to dry in his drying room. When the leather starts to crack where the staples are, it's dry. A heat source is necessary to properly dry beaver pelts, according to Mike, who said that the hides will develop mold if they're placed in unheated barns or garages to dry.

After the hides are dry, Mike uses needle-nose pliers to remove the staples from the skins. Fur buyers could potentially cut their hands when examining pelts if any staples remain. Then, after the pelts are removed from the drying boards, Mike uses a wire brush to clean the fur and bring it out around the edges of the dried hide. He said a comb is an alternative for accomplishing the same task. As a final step before selling his beaver pelts, Mike sprays WD-40 on the hair to make it shine.

If you find yourself in possession of a beaver or two this season, try out Mike's well-tested system for preparing the pelt for use or sale. It's an art, and it takes practice, but at the end of the day, you'll be glad for the experience. ★

LET'S FLESH IT OUT

How to build your own fleshing beam with a collapsible frame

BY CODY ASSMANN

Benjamin Franklin once said, “The best investment is in the tools of one’s own trade.”

During his lifetime, Franklin developed a knack for quipping clever one-liners that generally unveiled some accurate truths about the world. In this case, Franklin pretty much hit the nail on the head. If you’re a cowboy, buy a saddle. If you’re a blacksmith, buy a forge. And if you sell fur, get a good fleshing beam.

Fleshing is the process of removing all of the meat and tissue from the inside of an animal’s skin. If these tissues are not removed, they can cause the hair to slip and the skin to rot. You can efficiently remove these tissues if you combine a good fleshing knife with a quality fleshing beam. So let’s look at how to build a collapsible fleshing beam for your fur shed. This particular design is easy to store when it’s not being used, as well.

► Beam Basics

I’ll be up front in saying that my fleshing beam is more extravagant than necessary. In the past, pioneers would’ve used a simple log propped up between two cross braces. If you’re interested, there are many styles available to view online as well. Whichever you choose to design, there are a few basic rules to follow.

First, all beams need to be rounded and smooth with no rough edges that might tear the skin. Second, all beams should be set at an angle

that’s comfortable for you. Some beams are more vertically set, while others are completely horizontal. If you’re unsure of what you’d like, you can just build the beam itself and then experiment with different angles to see what fits you best. Beyond those two criteria, a fleshing beam can take on whatever design you want.

► Tools & Materials

Before beginning any project, it’s helpful to stock all the tools and materials you’ll need. The following is the list of the materials I used. Keep in mind that the dimensions of the beam will change depending on your body size and personal preferences.

- 9 feet of 2x6 lumber
- 4½ feet of 1x6 lumber
- 12 feet of 2x4 lumber
- Two door hinges
- One ½-inch threaded steel rod, 24 inches long

- Two ½-inch bolts and washers
- One ½-pint can of polyethylene varnish
- Twelve 2-inch wood screws

In addition to the materials, it helps to have the right tools. For this project, I used a hand plane, clamps, several grits of sandpaper, a drill with the correct head for screws and a ½-inch drill bit, a circular saw, a reciprocating saw with a metal cutting blade, a hammer, a level and a square.

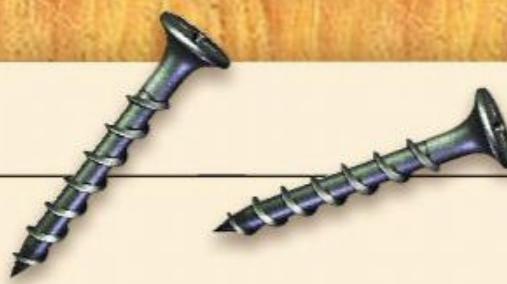
► Shaping Time

Once your tools and materials are gathered, the first step is to shape your beam. Start by determining the rough length you’ll want your beam to be. For my beam, I used a 2x6 that measured 6 feet long from end to end. After your beam is cut, you should rough out a V-shape at the working end of the beam. My “V” is 1

inch at the top and tapers to 6 inches about 30 inches from the front. This measurement can change depending on the animals you target, but it seems to be a good average.

After getting the beam roughed out, you’ll need to start rounding it. Use a hand plane to remove the edge material. The goal is to create a consistent arc through the entire beam. The angle of the arc is generally recommended to roughly match the arc of your fleshing knife. To save time, the beam only needs to be rounded as

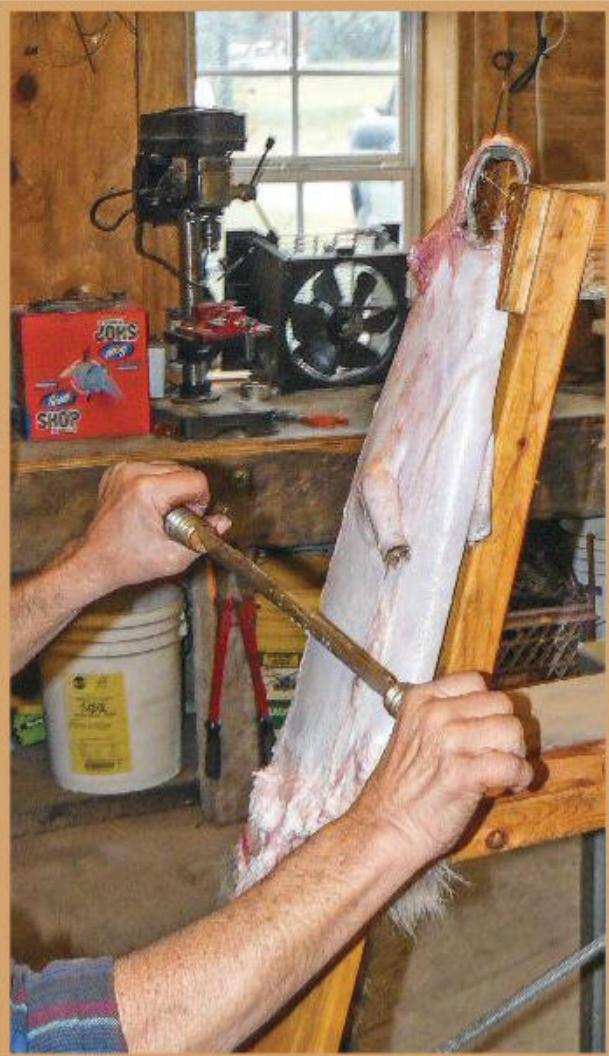




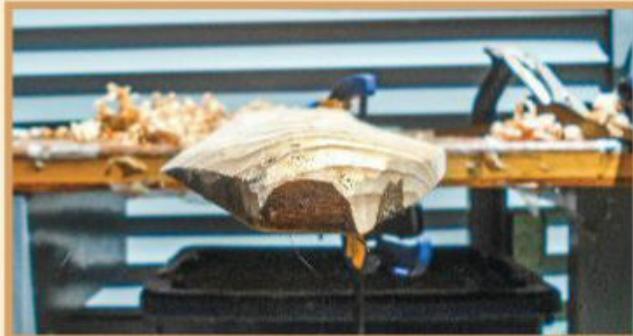
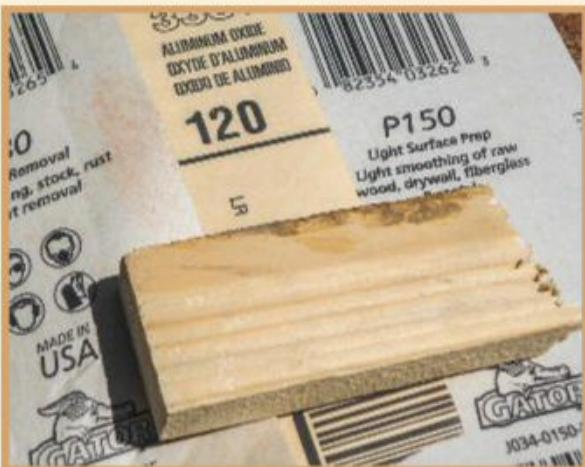
“Although it cost me a little more time and money, in the end, I now have a quality fleshing beam that will last me for years to come.”



Fleshing is the process of removing all the meat and tissue from the inside of the animal's skin so it doesn't rot over time.



LET'S FLESH IT OUT



A hand plane will help you shape the fleshing beam. Note that it only needs to be rounded as far as your arms can reach while standing at the front of the beam.



far as your arms can reach while standing at the front of the beam.

Once the rough shape of your board is created, sanding the working area is a good idea. This process removes any rough edges created with the hand planer and creates a smooth surface.

► Frame Details

With your beam shaped, you can now start creating the collapsible frame for it. Start by setting your beam against something solid. In my case, I used the wall of my

trapping shed. Set one of your 2x4s on edge, matching the end with your beam. Before cutting anything, play around and find the angle you would like to have your beam fixed at. Once you've found the right angle, stand like you would when fleshing. Then, reach down and create a mark on the 2x4 behind your heels. This mark will determine how long your 2x4 should be. Cut both of your 2x4s to this length.

With your 2x4s cut, you can now secure a door hinge to the bottom of your beam using the screws provided. Next, cut the

1x6s that will secure to the bottom of the frame. I happened to have some scrap 1x6 lying around and ended up using two 23-inch sections. That was enough to provide good lateral support for my beam.

Start by centering the hinge on the 1x6 and fastening them together. Then flip the beam and 2x4s over and screw the 1x6s into the bottom of the 2x4s. I used three 2-inch screws on each side to secure them. Keep your 2x6 beam sandwiched between the 2x4 frame while you work. The tension should be snug, but not overly tight.



You'll want to measure the support beam and make sure it's angled for the proper working height. A door hinge will keep it in place.

“First, all beams need to be rounded and smooth with no rough edges that might tear the skin.”

Once a 1x6 is attached at the front and rear, the frame of the project is complete.

► Angle Work

With the frame complete, you can set the beam's angle. Again, this angle should have been roughly determined in the shaping step. Now that your frame is made, you can easily pivot the beam up and down to find your sweet spot. Once you've discovered it, find a way to hold the beam in that spot. I used my circular saw for that task.

Now that your beam is at the correct angle, measure how long the support leg needs to be. The angle and length of this leg will vary based on your design. After measuring the distance from the bottom of my fleshing beam to the bottom of the frame, I cut a 2x6 to 30 inches. Once cut, I took the 2x6 and attached it to the bottom of the beam with my remaining door hinge.

The final step in the construction process was to pin the pivoting leg to the frame. For this purpose, I drilled a half-inch hole through both sides of the 2x4 frame and the 2x6 leg. It's essential to get a straight hole drilled all the way through.

When finished, you can insert a 24-inch threaded steel rod through the hole.

Although you could leave the rod whole, I decided to remove some of the extra length. Once it was all said and done, this would be the one thing I might go back and change about my beam. When I cut the ends, I cut them to leave about 2 inches of overhang. If I could go back, I would leave more overhang on each side. Leaving more overhang would give me more area to grip when removing the rod to fold up the beam. That being said, it still works fine. It's just one area I could improve.

► Finishing Touches

At this point, your fleshing beam is fully operational and can be collapsed for easy storage. However, it might be worth spending a little more time to finish the wood. For that, you have two choices: boiled lin-

seed oil or polyethylene. Boiled linseed oil is more natural and has been used by lots of people with good results. This method, combined with the fats from the animals you flesh, will help seal the wood.

I almost used that method myself, but in the end, I opted to layer on a few coats of polyethylene. A good friend of mine coated his beam with the substance and told me how well it works. One big positive of using polyethylene was that it hardened up the soft pinewood I used. If you use a hard wood like oak, you probably won't benefit as much from the polyethylene.

If you trap and are interested in putting up your own fur, it's essential to have a good fleshing beam. The beam featured here isn't the only design out there, but it works well for me. Perhaps the biggest design feature I appreciate is that this beam can be completely folded up and stored away when not in use. Although it cost me a little more time and money, in the end, I now have a quality fleshing beam that will last me for years to come. Like Mr. Franklin said, it's hard to go wrong when you invest in the tools of your trade. ★



Once it's fully assembled, the fleshing beam should be super sturdy, but it also won't take up much space when you aren't preparing furs.



WILD RESOURCES



It's both fun and satisfying to learn more about our ancestors' crafts before recreating them with items we harvested during our outdoor pursuits.



The WHOLE ANIMAL

This guide will help you get more from game than just the meat

BY TAD BROWN

Our ancestors lived a life of subsistence. They lived off the land and utilized everything—even body parts. They left nothing of an animal unused out of necessity and were quite ingenious with what they did with those components. In the 21st century, we no longer need to use these critter parts as a means of staying alive. But it is fun to recreate and learn our ancestors' craft while utilizing more of what nature provides.

Maybe it's just me, but I get a warm feeling of satisfaction when I can put a meal on the table mostly from Mother Nature. A meal of garden vegetables with a mess of fried crappie is hard to beat. I also get that feeling of satisfaction when I can utilize more of a harvested animal than just the meat.

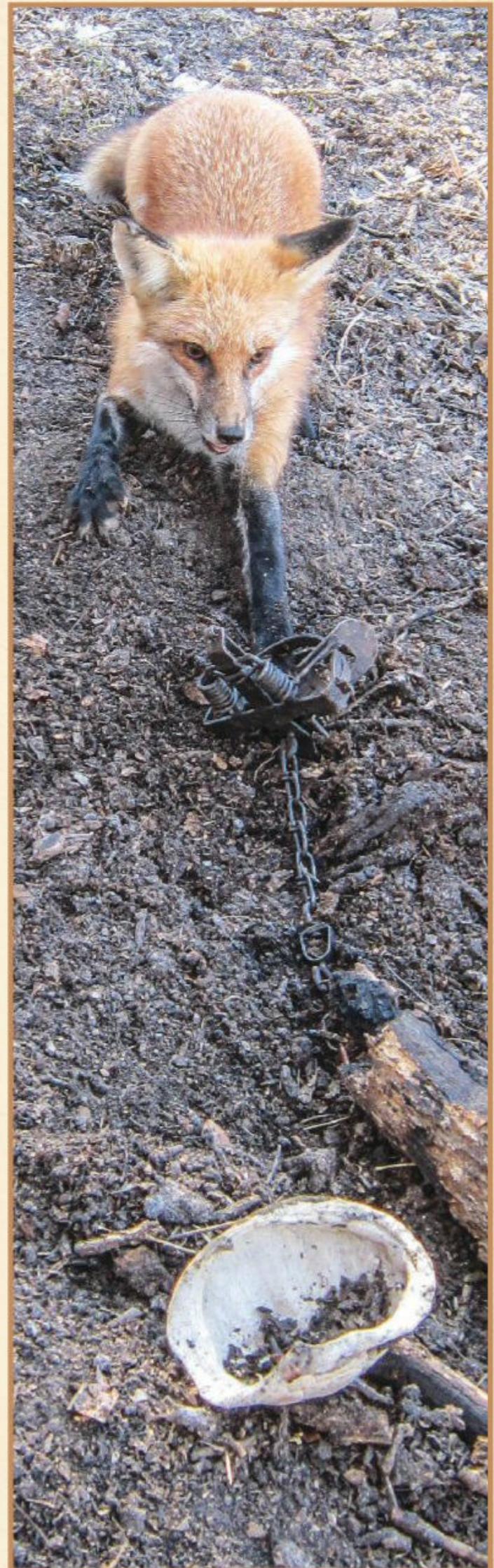
■ Bones & Shells

Turkey wing bones are my favorite and make great turkey calls. They also make great gifts and mementos of the hunt. Our ancestors used them as calls, needles and awls for sewing. They're well documented in archaeological sites in Arkansas and elsewhere.

Turtle shells are useful, too. My great grandfather used them as ash

trays and containers for change and ammo. I remember seeing them all over his house, and I was infatuated with them at a young age. To this day, I still cannot pass one up. I also use them as containers for spare change, ammo, trap parts and other small objects. I even use them for trapping when making flat sets. A friend used to make turtle-shell pouches out of them and decorate them with Native American designs. They make great conversation pieces as well as functional pieces at period rendezvous. I have one hanging in the house with my hides. Just be sure to check your state's law on the possession of turtle shells.

Pecker bone necklaces are also popular. My good friend Jill Easton, a fellow contributor to this publication, routinely crafts and sells beautiful necklaces out of critter penis bones, usually from raccoons, but others can be used as well. As a kid, a neighbor took me on my first raccoon hunt. When we caught a big boar raccoon, he skinned it in the field and harvested the pecker bone. He stuck it in his coat breast pocket and commented with a smile, "I'll find a good use for it." No doubt, they make great conversation pieces, and I have a





Our ancestors used deer and elk antlers for percussion and pressure flaking when it comes to flintknapping, and they're still popular materials for buttons and knife handles.

knife made from one by my cousin to go with my flintlock shooting gear. Imagine the useful utensil-type tools that could be fashioned from them.

■ Feathers

My favorite riddle is “It flies when it’s on and floats when it’s off. What is it?” A feather of course! Feathers have many uses. I use them for decorations, and they can also be sold in many states. In fact, some companies buy legal feathers of all sorts and pay about \$8 for a pair of turkey wings and up to \$25 for a prime turkey fan. If you have

the patience for it, they go for more on eBay.

Feathers are a miracle to me. Taken care of, they can last forever. They shed water, come in a variety of shapes and sizes, and some even change colors. Today’s uses include attractors for predators where legal (some states restrict the use of real feathers for that). They can be used as flags at predator trap sets as well as decoys for predator calling. Native Americans used them for ceremonial purposes, including headdresses and for decoration. Many still do so today. Archeologists have even unearthed blankets and clothing made of

woven feathers, and during colonial times, feathers were used for quill pens.

Thousands of years ago, feathers were a natural choice to help stabilize arrows and other projectiles on their way to the target. The size and length of the feathers had different effects on the projectiles. Larger feather vanes slowed the projectile down quickly after a short distant of lethal energy so they could be recovered for reuse. Most were used for hunting birds and small game on the ground so the arrows wouldn’t hit the ground with such damaging energy. Feathers are still used today by some archers. Plastic vanes have become popular, but purist like me feel there is no substitute for real feathers.

■ Cattle Horns

Cattle horns have been used for many years as drinking vessels, powder horns and horns to call dogs, warn others of danger and announce arrivals. Horns are hollow and can be used for many storage purposes. Again, in colonial times, frontiersmen as well as Native Americans used them as drinking vessels, either as they were or by plugging one end with a wooden stopper. On top of powder horns, there were also shot horns that carried and dispensed shot for fowl hunting.



The natural malleability of cattle and buffalo horns makes them uniquely suited for crafting everything from spoons and hair combs to powder horns and calls for dogs.



Make A Wing-Bone Call



Wing-bone calls are unique because they emit sounds relative to the bird they came from. A hen's bones are smaller, resulting in actual hen-pitched vocals, while a gobbler's bones are larger, emitting lower-pitched sounds more representative of gobbler vocals. Young juvenile hen bones emit even higher-pitched sounds due to the smaller diameter of the bones. Bones from a juvenile gobbler, or Jake, emit sounds like a young gobbler would emit. Nothing to me replicates the coarse yelps and clucks of an old mature gobbler than a call made from a gobbler's wing bones. With that said, let's break down the basic steps to produce a wing bone call.

1. Harvest the three main bones from the first two joints of a turkey wing. The larger humerus comes from the first joint, with the medium ulna and small radius bones coming from the second joint.

2. Using a sharp knife, remove as much meat and tendon as you can from the bones.

3. With a hack or band saw, cut the ends off each bone. Be careful, as they can be fragile and fracture if not held securely. Lay the bones out to make sure you are cutting off the right amount. You want



the medium ulna bone to be able to insert into the humerus bone at the small end, then the radius bone into the ulna.

4. The marrow needs to be removed from the bones. I like to use an air compressor and blow the marrow

out. Typically, the humerus has little if any marrow, but the tiny interior bones can be removed carefully with a sharp knife. Then, I use a round chainsaw file to smooth up the inside.

5. Now the bones need to be degreased. In a plastic bowl, combine a small amount of dish liquid and enough hot water to cover the three bones. Microwave on high until the water gets hot, but not to the boiling point. You don't want to cook the bones and make them brittle—just heat them enough to remove the greasy marrow.

6. Use a pipe cleaner and a small bottle brush to swab out the interior of the bones. Blow the insides out with an air compressor to finish cleaning and drying out the interior.

7. Allow the bones to dry completely. Remove any remaining tissue from the exterior and then file or sand down the ends to allow them to fit snuggly into one another.

8. Use hot glue to seal the ends together, filling any empty space completely. They need to be airtight to function properly. You now have a functioning wing-bone turkey call. —Tad Brown

Storage horns were fashioned from larger horns that were too large to carry on your person. They were used to carry excess powder needed for extended trips or battles, or to just cache powder for later. Frontiersmen carrying a flintlock needed a large horn with a coarser main charge of 2F powder and a smaller priming horn with finer 4F powder used in the frizzen for the initial spark.

Horns can be submerged in hot water and shaped to fit a desired form. They can be carved into forks and spoons, utilizing their natural curve. Buffalo horns were initially used in the new world, then cow horns became more common as colonizers introduced cattle. Some sailors and frontiersmen with lots of time on their hands would fashion powder horns into “map horns” and “story horns” to document their travels, family records and experiences. These are quite the treasure when found today and are fun to recreate.

■ Versatile Antlers

Antlers were used extensively by our prehistoric ancestors for many purposes. They flintknapped points for atlatls and arrowheads, and larger antlers like those from elk and moose were used for knife blades and scrapers. Large sections of antlers were used as percussion flaking to rough out larger pieces of flint into basic shapes. Then antler tines were used to finish the task with pressure flaking. Early points were used to hunt giant long-horned bison and mastodons. Points found from that era like Folsom and Clovis points had deep flakes running their lengths, requiring mighty percussion hits from large antlers. There is no other natural material that has the properties to grab flint and create flakes like natural antler. Knapping is a fun hobby that could come in handy someday. Flint flakes are just as sharp as a good razor.

Antlers were also used to make many tools and utensils like awls, sewing needles and weapons. Antlers were used as handles for knife blades and scrapers, and were also used as clubs with and without some sort of stone head. Again, it's fun to recreate these items for decoration, but there's also a market for such items if you



Skulls, claws and other animal parts—including raccoon pecker bones (above left)—are highly sought after at rendezvous because they can be used to make valuable pieces of art.

become good enough. Many of today's knife-makers favor real antler handles.

Nowadays, antlers are harvested for many uses. Eastern cultures grind them into powder for medicinal purposes. Elsewhere, they are used in chandeliers, lamp stands and other types of décor. They make great cabin door handles and drawer pulls as well as coat hangers. Larger antlers can be carved like whale and walrus tusks.

■ Skulls, Teeth & Claws

These components can be valuable, too. Certain teeth and claws are of more interest than other more common ones. Teeth and claws are used for necklaces like the ones Jill makes. Turkey spurs and beards are other body parts that have value and are used on necklaces and hat bands. There's also a market for turkey feet with spurs intact. I recently saw a turkey-foot back scratcher on Facebook, and there is a guy

who makes knives with turkey-feet handles. All are marketable items to the right person and great conversation pieces to display.

Clean skulls make great coffee table items, especially for man caves and she sheds. Spurs, beards and skulls are trophies, too. Not unlike a big buck mount, hunters want to show off their successful hunts for critters not wearing antlers. An old gobbler with 1.5-inch or longer spurs and a 12-inch beard is equivalent to a 170-inch buck to me.

I have on my coffee table a skull from a hog that I killed with a knife as well as a skull from a coyote with major tooth damage that I called up. The damage showed he was a wily old veteran. Both are trophies to me. So before you discard the remnants of the next critter you harvest, ask yourself what else you could save and use to commemorate the hunt, put to practical use or maybe make an extra buck. ★

ANTLER & HORN MASTERPIECES

A closer look at Todd Strupp's one-of-a-kind mugs, and how to make your own | BY JILL J. EASTON



Todd Strupp transforms cow horns, antlers and wooden bases into handsome, functional works of art.

A dead buffalo probably inspired the first horn mug. Some passing mountain man cut the horn off, scraped out the stuff inside and thought, "I could drink from this." During long, cold nights huddled close to a blazing fire, he cut some more and whittled, plugging one end with wood, and soon he had a fine drinking cup.

Although drinking horns have over 2,000 years of proud history in the hands of such cultures as the ancient Vikings and Greeks, during the last two centuries, horn mugs have all but disappeared. Thankfully, a modern crafter discovered that a section of cow horn could be beautiful as well as useful.

Todd Strupp of Rice Lake, Wisconsin, makes stunning, flowing creations that

harness the natural curves of cow horn, the grain of wood and the texture of deer antler. But Todd doesn't stop when he's found the ultimate fit of antler, horn and wooden base. He decorates each piece with art that he scribes into the cup and handle. The best part of Todd's art is that each unique mug isn't just a display piece—it's made to be usable.

Works Of Art

When Todd is selling horn art from his Antlered Mugworks booth at rendezvous, art shows, motorcycle rallies, hunting expos and trappers' conventions, he looks the part of an 1830s mountain man—except he's much cleaner and just a bit more modern. The day I met him at the National Trappers

Association Convention, he was dressed in a slouch hat, turquoise jewelry and a bear-claw necklace while carrying a medicine bag. He fully looked the part of a mountain man. This isn't surprising, as Todd is a long-time rendezvous-goer and has studied the period extensively.

The inspiration that led him to a career making mugs was actually a rendezvous at Prairie du Chien, Wisconsin, in 1992. "A buckskinner at the rendezvous was drinking out of a horn cup," Todd said. "It wasn't decorated—it was raw and crude, but it was cool. I loved the way it combined three natural products: horn for the drinking cup, antler for the handle and a wooden base to give it stability. I wanted one of my own, so I went home and made one."



After finding the right horns, Strupp cleans out their insides, shapes them and polishes them. The etching and hand-painting comes later.

His first mug was simple and utilitarian. Eventually, it had a buffalo, Todd's spirit animal, etched onto the side. It has stood the test of time, and he still drinks out of it regularly. Todd had no plans to make more horn mugs—until his mom asked for one.

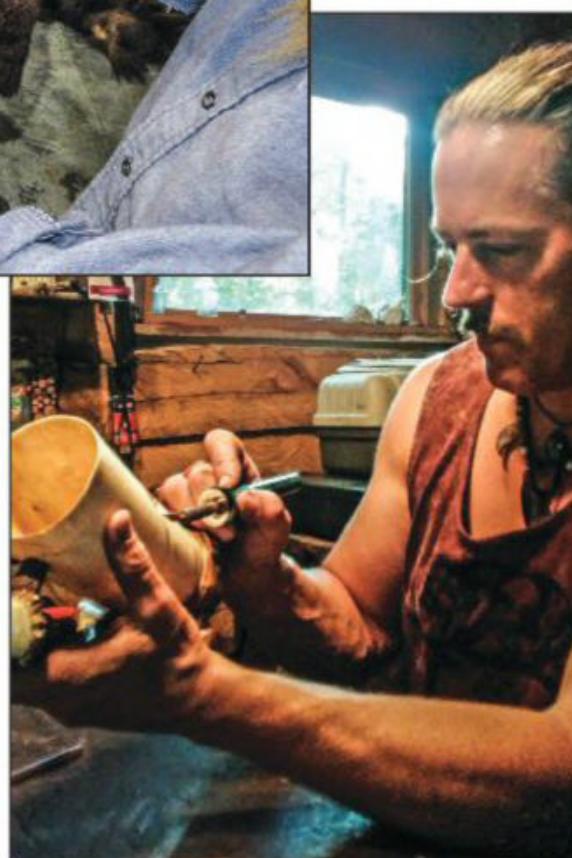
"Soon, it snowballed," Todd continued. "Family members and friends all wanted horn mugs. I experimented to see if I could use a burning pen to cut into the cup. Then I made a few more and was taking them to rendezvous for my trade blanket. I began selling a few. With practice, the art on each mug was getting better and better."

While we were discussing his transition from a 9-to-5 worker to an entrepreneur, Todd's skilled hands were busy burning the design of a bear into a partially completed mug. After the design was finished, he enhanced the line drawing with color.

More Designs

Even as a young child, Todd was always crafting, building or creating something. He studied art and psychology in college, then worked as a counselor for the Department of Corrections. His DOC career and raising a family kept him busy, but Todd was always finding time here and there to create art.

"As I was creating my mugs and selling them at rendezvous, I realized the cups combined both of my passions: creating and sharing the beauty of nature," Todd said. "It is an incredible feeling when I design and create a mug,



and someone admires it to the point where they have to have it."

For more than 20 years, Todd has been making horn mugs. And over the last four years, he's made a living selling mugs and making custom orders.

"Now, 30 percent or more of the pieces I make are commissioned," Todd said. "If someone sends me a picture, I can translate it into a design on a mug. One lady really liked mermaids, so I put one on a cup for her. Another wanted a mug with a sasquatch on it. Business logos are another big request—my mugs have been given as sales incentives and to celebrate promotions.

Probably the strangest request was a guy who wanted a mug to match his tattoo."

Even though he spends many weekends at shows and away from home, Todd still enjoys every part of the business. "I've been living a dream and feeding my passion making these one-of-a-kind items," Todd said. "Each one takes hours from start to finish—cleaning the horn, finding the right antler and wood, and then fitting them together. The horn, antler and wood all have to have the right balance and energy. Once the mug is created and built, then the image is burned into the horn. On some, I blend in paint for added depth and color."

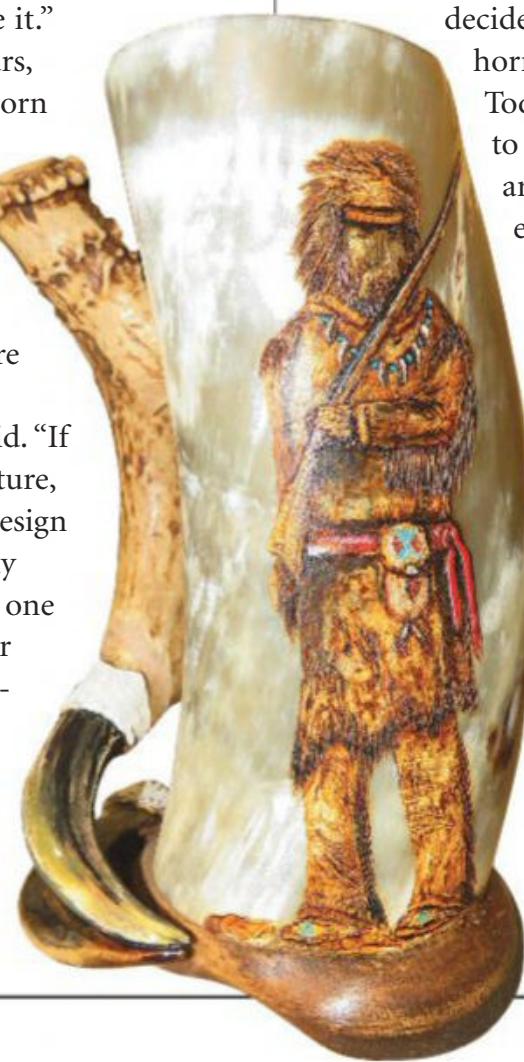
Not surprisingly, many of the mugs are sold *au naturel* with no artwork. They are works of art all on their own.

The Process

Cow horn can be obtained by sawing one off of your neighbor's cow or by buying a horned cow head from a slaughterhouse. Once you get a head, the horn has to be cut off of the skull, and the pith has to be removed by heating and scrubbing. This is a messy and time-consuming process. It's much easier and cheaper in the long run to buy prepared cow horn from one of the many sellers on the internet. If you

decide to buy a pre-cleaned horn, these are the steps Todd uses. If you happen to have a cow handy, there are plenty of YouTube videos on how to clean out horns. Good luck!

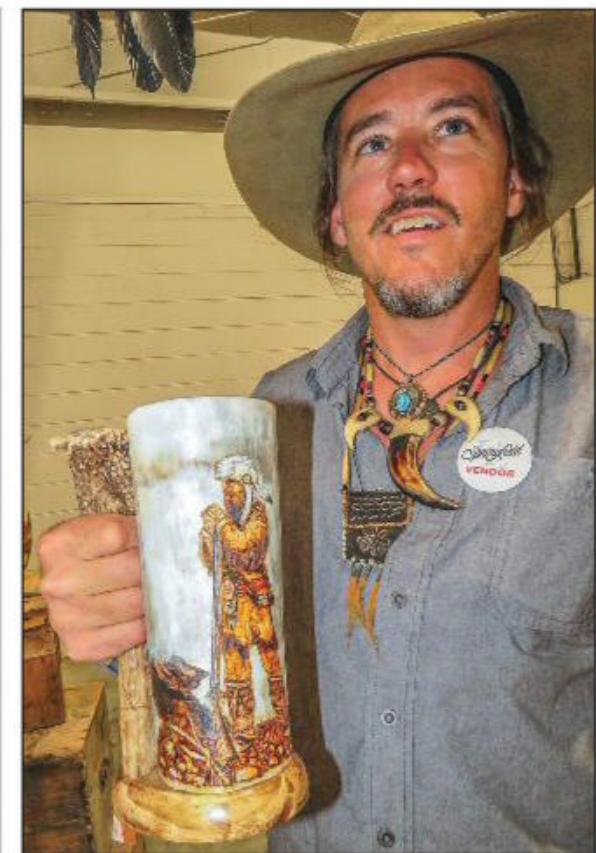
1. Saw both ends off of a section of the cow horn. The size should match your mental image of the finished mug. Sand and polish the horn to your desired finish. Use fine-grit sandpaper to curve the upper edge.



Painted or left *au naturel*, Todd Strupp's one-of-a-kind mugs would make any frontier aficionado proud.

2. Cut a block of wood slightly larger than the shaped horn and smooth it until it has a pleasing look and will fit solidly against the horn. Todd makes his wooden bases wider than the horn for stability and to utilize the flow of the wood. Sand the edges so that the top edge is rounded and smooth and the bottom is flat. Then pre-drill matching holes through the wood and into the horn. Use very small-diameter but long screws to fasten the parts together. Countersink the screws so that the bottom is flat and won't wobble.

3. Find a piece of deer antler, wood or



Strupp shows off one of his horn and antler "mugsterpieces," featuring a beautifully carved and painted frontiersman.

Crafting **ANTLER BUTTONS**

Antler is probably one of the most under-utilized materials in the natural world. Not only are some types of antlers ground up into aphrodisiacs, but they also make wonderful knife handles, chandeliers, dog chews and even buttons.

To turn an antler into buttons, you will need a fine-blade hacksaw or band saw, a drill with a small bit and sand paper. Antler points off of smaller bucks make great rough-hewn fasteners with a couple of holes for thread. If you want something fancier, slab 1/8-inch even sections of the antler.

Cutting bone stinks, so do this outside or in a well-ventilated area and wear a paper mask to keep the fine grit from going up your nose. Sand first with medium and then fine sandpaper—the slabs will become shiny with work. Drill two holes through the bone to sew them on. Give the living edge a gentle polish.

Each button will have a unique look. When the buttons are finished to your satisfaction, sew them onto an article of clothing and wait for the compliments. —*Jill J. Easton*



other material that you like as a handle. Decide on the placement and how it will work with the horn and wood. Sand your handle so that it's comfortable and will follow the curve of the horn. Once it's cut and fitted, put glue around the base and screw it to the mug.

4. Seal the inside of the horn and wood with a food-grade sealant. After the interior coating is dry, fill the mug up with liquid to see if there are any leaks. If you discover a leak, add another layer of sealant.

5. If you decorate the mug, let your imagination run free. You can use a wood burner, knife or other scribing tool. Note that if you paint directly onto the horn, your hands and repeated washing will wear the image off.

"I've come a long way from carving sticks as a kid," Todd mused. "Throughout my life, I have crafted many different types of artwork. When I started making art that can be used, it was a reward in itself. The ultimate reward, though, is when someone comes along and admires the energy in a piece that is special to them and connects with it. That is a deep and profound shared experience, and one I treasure each time it happens." ★

Starting A **GUN SHOP**

**How one couple made their
American dream a REALITY
in the SUNSHINE STATE**

BY JOHN E. PHILLIPS



iStock Image

If you're dreaming of moving to the country, your move will be far more successful—and you'll be much happier—if you have a plan. One young couple provides an excellent example of the maxim "Look before you leap" and the success that can come from starting a business you love. Meet Hillary Dube and her fiancé, Ross Rivkin, the owners of HNR Gunworks in Inverness, Florida. Previously, these two young people lived in Cromwell, Connecticut, and Rivkin, a trained custom gunsmith, worked at JoJo's Gun Works in Southington. But in January of 2017, the couple thought about moving to the rural South.

"We wanted to live in a warm climate where we didn't have to fight traffic every day," Dube explained. "We researched small towns in Florida specifically due to its mild weather, and we knew Florida's gun politics were favorable to gun owners—it's known as the Sunshine State."

Then the couple made a list of the people they knew who lived in Florida. "I knew no one, and Ross only knew one person," Dube said. "We called and asked if we could spend a week with him while we researched the possibility of moving to Florida and setting up our own gun shop."

⊕ Due Diligence

"Prior to traveling to Florida, I must have called what seemed like 800 different realtors," Dube said. "I got a list of properties that met our needs in different Florida counties so that when we arrived, we could consider about 10

properties per day. I also researched demographics and the population counts in each county we were considering as well as the median age of the residents and the number

Hillary Dube and Ross Rivkin worked together to launch HNR Gunworks in Inverness, Florida.



of armed forces veterans there. We wanted to live somewhere that was small enough that, when we walked down the streets, people would recognize who we were, smile at us and would know our names."

Some of the counties that Dube and Rivkin considered had a large number of retired military personnel, and they knew that those people generally owned guns and liked to hunt and shoot. They learned that many Citrus County residents were veterans.

Dube also contacted Friends of NRA, a grassroots program that raises funds for shooting sports, and talked with Bret Eldridge of North Florida. He gave her the names and phone numbers of people he knew who might be interested in custom gunwork and repairs and others who might buy guns. She also researched Citrus County's gun clubs, gun owners and pawn shops to get an idea of the number of people who might need repairs or purchase a gun.

"Ross is passionate about working with guns," Dube said. "We knew before

we moved that we wanted to own a gun shop that did repairs and custom gunwork and sold guns. My job would be to identify customers who would come to our shop, operate the business with the skills I'd learned in my college degrees in accounting and marketing, gain clients and operate a financially successful business."

⊕ Next Steps

During Dube and Rivkin's week-long trip in search of a place to live as well as a business site, they spotted a storefront for rent that wasn't on their list. Because the couple would have to put a major portion of their capital into renting and renovating a building, they realized they wouldn't have enough money left over to buy a house and land. So, the practical solution was to rent, at least temporarily, and they found just such a home less than a mile from their business location. As soon as they rented the building, they applied for a Federal Firearms License (FFL).

Dube started working with the Citrus County SCORE organization, made up of volunteers who are active and retired businesspeople. This group provides free counseling and mentoring and gives advice to new small businesses while also providing access to documents, templates and tools and helping businesses that are moving there.

"In February of 2017, when we came to Citrus County, I made a 20-page business plan with SCORE to determine how much we'd have to spend to begin our business and how much we'd have to make to sustain the business and have a profit," Dube said.

From their research, Dube and Rivkin knew Inverness had 7,000 residents and that three gun shops were already in business there. "We wanted to have good relationships with the Inverness gun shops already in existence," Dube said. "Today, we help them out, and they help us, too. We divided our building in half with one side

STARTING A GUN SHOP



of it set aside for selling new guns and accessories and the other side for Ross's machine shop. Although we like to sell guns, repairing, modifying and building guns is the bulk of our work. We also sell guns on consignment with our company taking 15 percent of the guns' selling prices."

Dube and Rivkin bought their equipment in Connecticut and had it shipped by freight line. Because HNR Gunworks started with an entire machine shop full of equipment and tooling, it offered more services than the other gun shops in

town. As Dube emphasized, "We've provided the other gun shops with a way to get custom work done on guns that they weren't equipped to do."

⊕ **New Customers**

"We moved to Inverness on Easter weekend of 2017, made the modifications we needed to make to the building, set up our equipment and opened our doors as soon as we could on June 13, 2017," Dube said. "I planned a ribbon cutting to announce the opening of HNR Gunworks.

We had people come in to see what we were all about, and the local newspaper did stories about who we were.

"I went to the networking groups in our county to let people know what we were doing even before we had our official ribbon cutting. Ross and I set up our booth at events at churches and festivals, we went on cycling rides, I took a pottery class to meet people, and we sponsored a bowling team. A number of people



Hillary Dube handles HNR Gunworks' sales and bookkeeping, along with efforts to grow the business throughout the region.

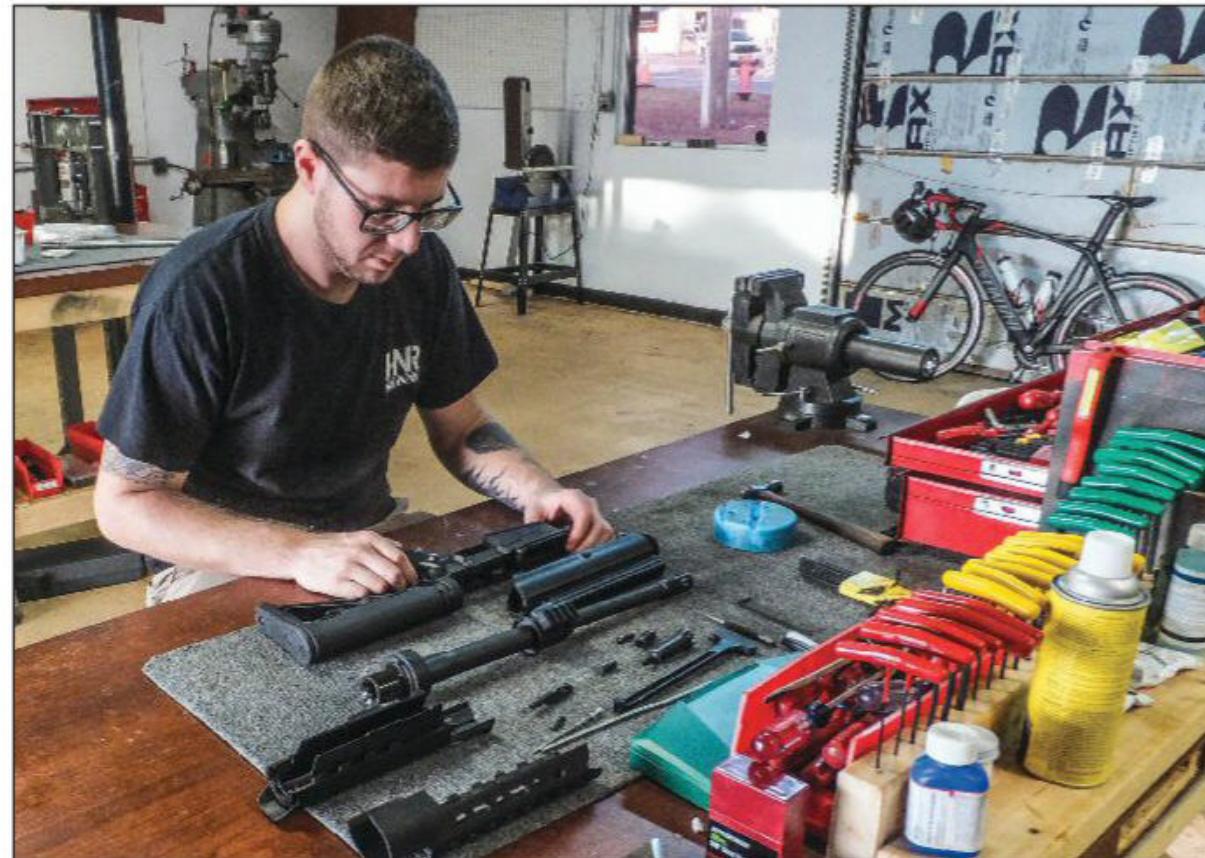
showed up at the ribbon cutting, which offered food, raffles and giveaways.

"We've been very busy since the ribbon cutting. We've cleaned and repaired a number of guns, and we've had many customers come in with pieces and parts of guns they'd had for years because they didn't know anyone who could repair their guns. A big flood occurred in Inverness 10 years before we arrived, so Ross saw many rusty guns and those that needed repairs from the flood, and that created our initial business. Today, we're doing more custom work like porting and threading barrels, trigger jobs and putting Cerakote on guns.

"With our marketing program, we've reached out to several surrounding counties and now have customers coming to our store from Tampa, Orlando and Gainesville. People have also contacted us from all across the country on our website, which draws about 10 percent of our business." Within six months of opening, the majority of HNR Gunworks' business came from a radius of about 60 miles from the shop. Their two-year goal was to grow enough to consistently draw business from the entire state.

"I'm convinced that the growth and future of HNR Gunworks will come from

Before moving to Florida and opening HNR Gunworks, Ross Rivkin learned valuable machining and gunsmithing skills at JoJo's Gun Works in Southington, Connecticut.



people hearing and learning about us, boxing up their guns and sending those guns to us," Dube said. "Once we repair their guns, we'll ship the guns back to them. We've found that most of our customers prefer not to leave their homes to get their guns repaired, modified or rebuilt. Usually, we can fix a gun within a day, unless it's a major custom or refinishing job. Then we may require a week to work on it.

"In the next three years, I hope we can double the inventory of new guns we have for sale," Dube said. "Within five years, we hope to have grown our business enough to hire two to three more gunsmiths to work with Ross. I'd like to see our online business grow, too."

Perfect Partners

Since they moved to Florida, Rivkin and Dube have worked together all day every day, and they don't have to shovel snow or sit in traffic to go anywhere. "Ross and I have a very good working relationship," Dube said. "He knows what his responsibilities are, and I know what mine are for our business. We're both very efficient, and we get lots done in a day's time. Ross does the physical work, and I'm responsible for the paperwork and sales. HNR Gunworks plays

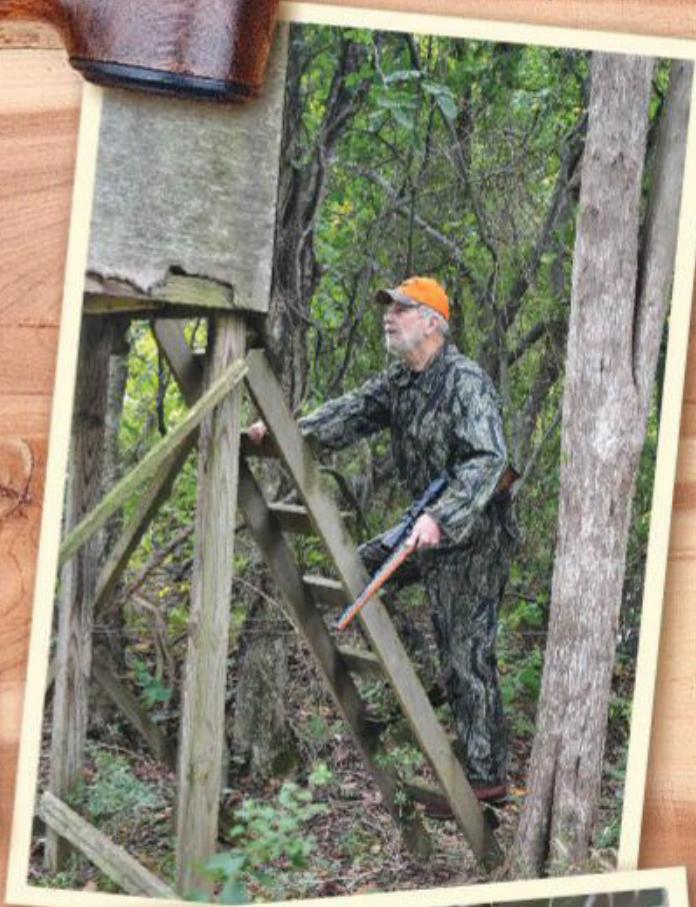
to both of our strengths and interests."

Dube also believes in giving back. In January of 2018, Dube joined the Friends of NRA board and is an ambassador for the Inverness Chamber of Commerce, attending ribbon cuttings for new businesses and going to mixers where businesspeople get to know each other.

The future of HNR Gunworks is extremely bright because Rivkin and Dube spent time doing mountains of research to identify a promising market and then determining what would separate their business from others. They also studied the growth potential for their business, made and followed a plan for that growth, and became very involved in the region's events to become new pioneers. For more information, visit hnrgunworks.com. ★



CUSTOM SINGLE-SHOT





DIY DEER GUN

Create your own regional rifle to target the game in your area

BY J. WAYNE FEARS

It was the trek from hell. Getting into the mountainous fold of land so the wind would be in my favor required me to go straight up a bluff that was thick with cedar and limestone boulders. Then I had to slide down a steep hillside that was covered with scrub brush, greenbriers and rocks. I was soon in the rocky crevice that I used as a stand. It looked down into a large white-oak-covered basin where three deep hollows came together. Once settled in the rocks, I glanced down at the little Thompson/Center G2 Contender rifle I'd assembled just for hunting in these rough Cumberland Mountains. "So far so good," I thought.

Within an hour, a large, 193-pound buck came to investigate the low grunts I'd made with my grunt tube, and the 7-30 Waters handload that I'd developed for this semi-custom rifle took the buck cleanly at just under 200 yards.

Following that first hunt, I named the rifle the Cumberland Deerslayer. Since then, the little rifle has taken many deer on the rugged Cumberland Plateau that spans parts of Kentucky, Tennessee, Alabama and Georgia.

It'd be incorrect to say that the Cumberland Deerslayer is a fully custom rifle. It's a compact rifle I assembled to hunt a specific geographic region using aftermarket parts and a few friends. The resulting rifle is perfect for the area where I live and love to hunt. Any hunter can do the same for most geographical areas.

What You Need

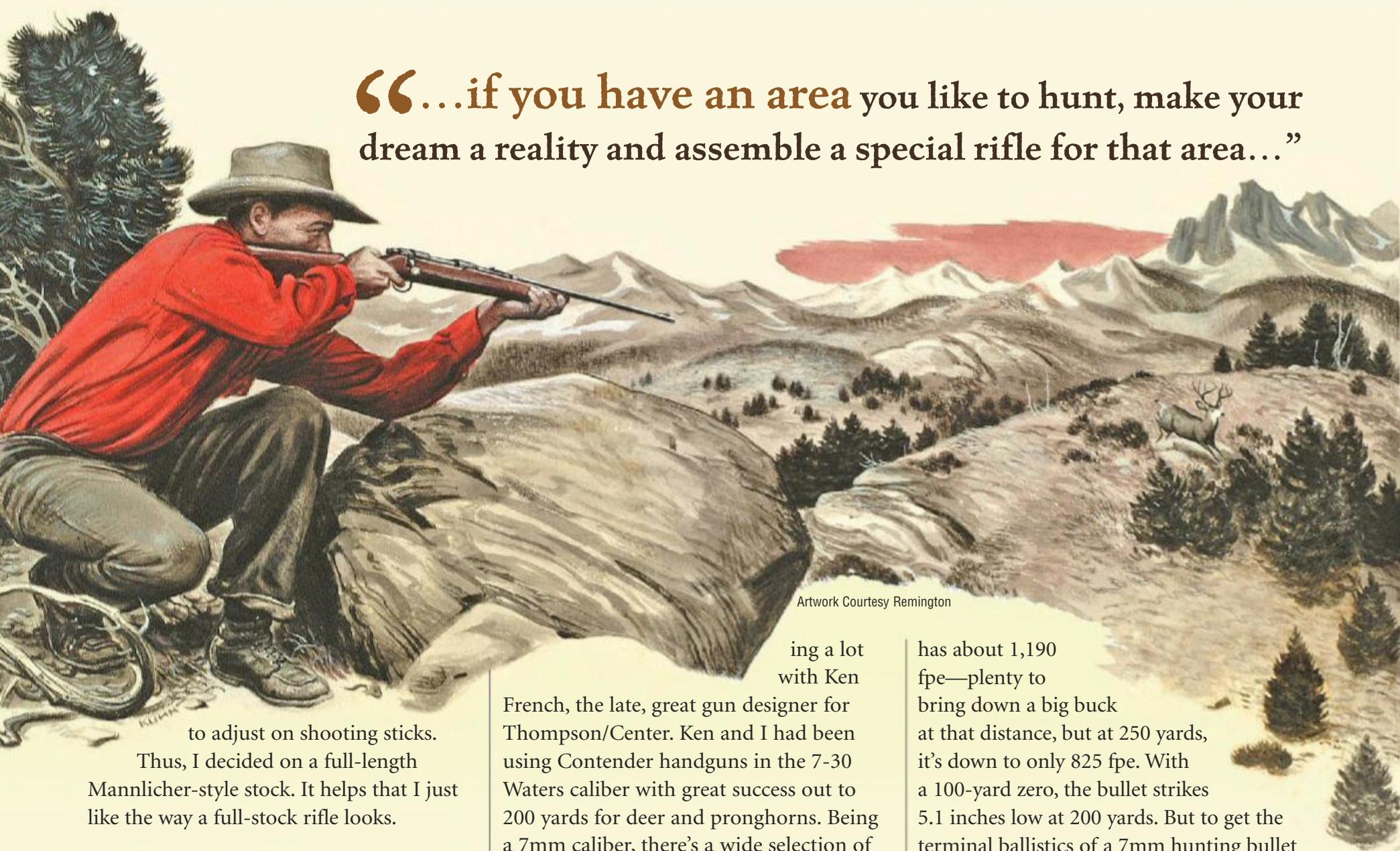
Taking an existing rifle and modifying it to meet your special geographic hunting conditions requires that you evaluate what your special conditions are and what rifle requirements you need to meet those conditions. Perhaps you have a rifle that, with

a few modifications, will do the job nicely. Here's how I did it.

The Cumberland Mountains where I live and hunt are steep, rocky and extremely thick in many places, so I wanted a compact rifle with an overall length of about 35 inches. The mature bucks in this area spend most of their lives in the thick brush on the steep mountain slopes, in the crevices of rocky cliffs and among boulders as large as boxcars. Lots of steep hiking is required, so I wanted a lightweight rifle—nothing over 6.5 pounds including the scope.

Due to the thick cover, getting a second shot is rarely an option, and since I'm a single-shot rifle fan, I knew that one of these would do the job. Plus, most single-shot rifles have short actions, reducing their overall length. I like to stalk hunt, so I wanted a well-balanced rifle for off-hand shooting and for long shots that would be easy

“...if you have an area you like to hunt, make your dream a reality and assemble a special rifle for that area...”



Artwork Courtesy Remington

to adjust on shooting sticks.

Thus, I decided on a full-length Mannlicher-style stock. It helps that I just like the way a full-stock rifle looks.

Caliber Concerns

Most shots in this thickly vegetated, mountainous terrain are short—usually under 100 yards—but occasionally there's a shot in open hardwoods or along a powerline right-of-way that may be out to 250 yards. So, I wanted a caliber that was proven at 100 yards while still being accurate and powerful out to 250 yards. Also, due to an ATV accident several years ago that shattered my right shoulder, leaving it recoil sensitive, I wanted a caliber with mild recoil.

So, my caliber criteria were relatively simple: I wanted a mild-recoil, mild-report cartridge that was easy to reload and would carry 1,000 foot-pounds of energy (fpe) out to 250 yards, the maximum range I would ever shoot the rifle. My desire for 1,000 fpe was logical, in my opinion; that's the minimum energy it takes to put down a large rutting buck.

I considered a number of popular deer calibers but finally selected the 7-30 Waters, where a .30-30 case is necked down to 7mm. I had been handgun hunt-

ing a lot with Ken French, the late, great gun designer for Thompson/Center. Ken and I had been using Contender handguns in the 7-30 Waters caliber with great success out to 200 yards for deer and pronghorns. Being a 7mm caliber, there's a wide selection of excellent bullets available, and the 7-30 Waters is easy to reload.

Ken and I began to study the ballistics of the 7-30 Waters when shot from a 21-inch rifle barrel, and it resulted in what I was looking for: light recoil, low report and accurate with handloads out to 250 yards.

There's only one factory load available for the 7-30 Waters: Federal offers one that features a 120-grain Sierra GameKing BTSP bullet with a published muzzle velocity of 2,700 feet per second (fps) and 1,942 fpe at the muzzle. At 150 yards, the round

has about 1,190 fpe—plenty to bring down a big buck at that distance, but at 250 yards, it's down to only 825 fpe. With a 100-yard zero, the bullet strikes 5.1 inches low at 200 yards. But to get the terminal ballistics of a 7mm hunting bullet at 250 yards, reloading would be required.

The Foundation

With a caliber selected, I started my search for the basic rifle from which to work. In my gun safe, I had a single-shot Thompson/Center G2 Contender rifle that had a 23-inch .223 Remington barrel. Since I had a lot of experience with the G2 Contender and liked it, I decided to remove that barrel and use the walnut-stocked receiver for the heart of the new rifle, as it had a crisp 5-pound trigger that

The G2 Contender is easy to disassemble without any real gunsmithing skills.



I liked. The G2 Contender is easy to break down without gunsmithing skills, so I removed the .223 Remington barrel.

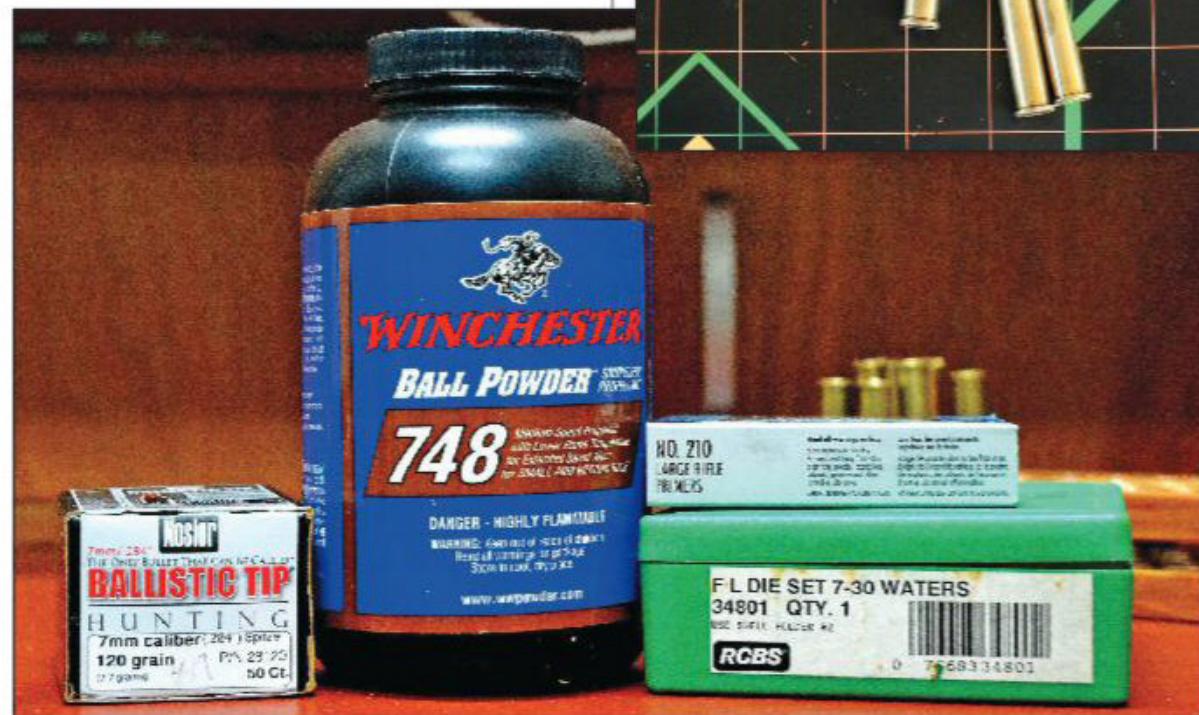
My next step was to order a 21-inch 7-30 Waters target barrel from the T/C Custom Shop without open sights. It was important that an anchor hole be drilled 8 inches from the muzzle for the upper sling swivel stud to go through the thin wood of the Mannlicher-style forearm. The guys at the custom shop said they could do it. (Sadly, while Thompson/Center no longer has a custom shop, excellent custom barrels for the G2 Contender are available from SSK Industries.)

While waiting for the barrel, I designed a Mannlicher-style forearm for the barrel that used the same attachment hardware for the .223 Remington setup. A friend and woodworker made the new forearm from walnut. Of course, I wanted the forearm to match the separate walnut stock, so after the forearm was complete, I had a local church woodworking group finish it to match the stock.

For one-shot rifle accuracy, and due to that shattered shoulder a few years ago, I wanted as little felt recoil as possible, so I installed a LimbSaver recoil pad on the stock. It reduces the felt recoil by up to 70 percent and helps control muzzle rise.

All Together

The 7-30 Waters barrel arrived soon after I received the finished forearm, and I assembled the rifle immediately. It was



The author chose the 7-30 Waters because it offers deer-dropping power without much recoil.

a compact, lightweight beauty. Then I attached a Leupold 4.5-14x40mm VX-3 scope using a Weaver rail and rings. Since there wasn't much room under the scope for my thumb to cock the G2 Contender hammer, I attached a Carlson's hammer expander to make cocking the rifle easy. I also installed a leather sling, and for carrying extra cartridges, I added an Uncle Mike's buttstock ammo holder.

On the range, the little rifle shoots

1.3-inch, five-shot groups on average at 100 yards with Federal factory loads. But my long-range hunting load for bucks at ranges out to 250 yards is a handload that I have come to trust with 120-grain Nosler Ballistic Tip bullets sitting on top of 35 grains of W748 powder. From the 21-inch barrel, the muzzle velocity is 2,487 fps, and at 250 yards, it still has 1,162 fpe. At 100 yards, this load gives me a three-shot group average of 0.87 inches using a sandbag rest.

Shooting off of sticks, the gun will create a 1.1-inch, three-shot group at 200 yards. With a 200-yard zero, the bullet drop at 250 yards is only 4 inches. (Safety note: Since this load features a pointed bullet, it's intended only for single-shot rifles. It would be unsafe to use in rifles with magazine tubes.)

The compact and lightweight Cumberland Deerslayer has served me well in the wild terrain where I hunt, and it has taken a number of bucks and a much larger number of does. I've found it to be an excellent wild hog rifle as well. So, if you have an area you like to hunt, make your dream a reality and assemble a special rifle for that area. You'll take great pride in hunting with your own creation. ★



With the right 7-30 Waters handloads, the author's custom G2 contenter is quite the tack driver.

and it has taken a number of bucks and a much larger number of does. I've found it to be an excellent wild hog rifle as well. So, if you have an area you like to hunt, make your dream a reality and assemble a special rifle for that area. You'll take great pride in hunting with your own creation. ★

C. THE 2020 Blackpowder Market



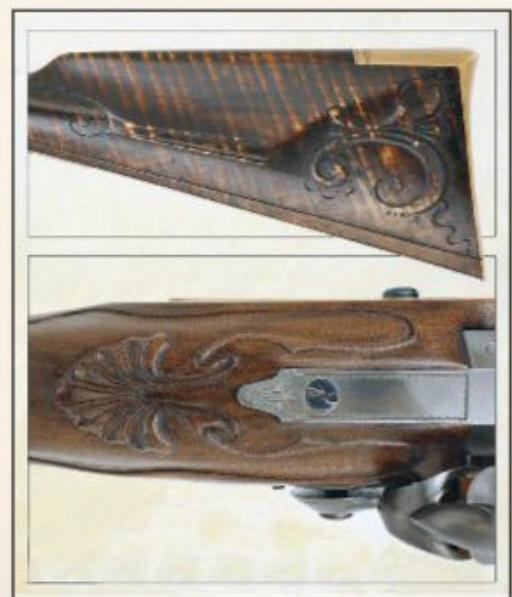
A collection of new and noteworthy products blasting onto the scene

BY FRANK JARDIM

Companies in the blackpowder business are similar to those who make conventional firearms in that new products are the lifeblood of their business. In the blackpowder world, however, many are new “old” products. Here’s a first look at some notable blackpowder guns and gear introduced at the Shooting, Hunting, Outdoor Trade (SHOT) Show in Las Vegas this past January.

American Pioneer Video Relief Carving

American flintlock rifles in the 18th and 19th centuries often had their wooden stocks carved with relief and incise designs. These were the obvious hallmarks of a skilled gun-maker and something you’ll never see on a commercially manufactured reproduction. Well now you can learn how it was done, and how to do it yourself, with this 85-minute DVD recorded in HD at the shop of master gunsmith and Contemporary Longrifle Association (CLA) artist Mike Miller of Edmonton, Kentucky. He demonstrates how to design, lay out and carve an elegant English shell pattern on the breech of an English fowler and carve a fine brass-mounted, maple-stocked American colonial-made flintlock rifle. The techniques demonstrated have a broad range of applications for relief carving stocks in a historically accurate manner. (americanpioneervideo.com)





CVA Paramount Pro

This is an upgraded version of CVA's state-of-the-art, bolt-action Paramount rifle to deliver precise accuracy and killing power at 300 yards and beyond using specially designed Powerbelt ELR bullets and heavy charges for high velocities. Using Buckhorn 209 powder, the gun delivers an average muzzle velocity of 2,400 fps. The muzzleloader has a Grayboe fiber-glass stock, a Cerakote finish, an adjustable Trigger Tech trigger, and the gun weighs 8.75 pounds—a full pound less than the standard Paramount. The 26-inch, free-floating, stainless steel Bergara barrel has muzzle threading as well. A "Colorado" variant is also available to meet Colorado's hunting regulations for elk and bear, which require a .50-caliber, full-bore bullet (no sabot) and open sights. (cva.com)



Cimarron 1860 Grant's Gun

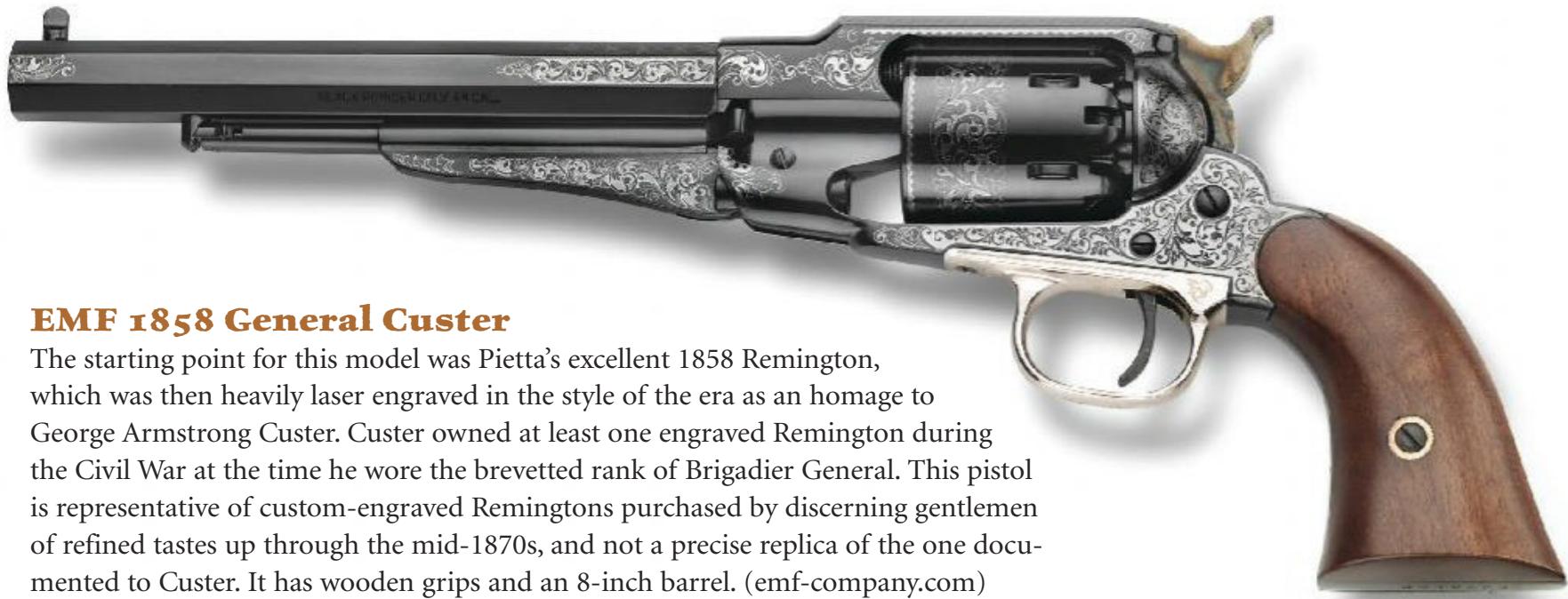
Grant's Gun from Cimarron Firearms is part of a limited five-gun series commemorating the Civil War. All five models have solid silver flag inlays in their wooden grips, but Grant's Gun is different because it's a copy of a pistol that General Ulysses S. Grant actually owned, serial number 151718, obtained from his heirs in 1998 and sold at auction in 2009 for \$402,000. Heavily factory engraved in a manner characteristic of Gustav Young, the pistol is referred to today as the "Union & Liberty" because of the banners bearing those words engraved on the barrel. Here Cimarron has accurately duplicated the engraving with a special laser. (cimarron-firearms.com)

CVA Paramount Muzzle Brake

The heavy charges used in the Paramount series translate into some serious recoil forces that can be pretty hard on the shooter. CVA's new

Paramount muzzle brakes are designed specifically to tame that recoil by 30 to 40 percent. Unique to their design, the first gap from the barrel is big enough to pull a patch through. In other brakes with smaller ports, patches often get stuck in the brake. With the Paramount Brake's larger port, you can grab the patch with your fingers to prevent it from getting stuck. The brake's threads are precision cut and timed to line up perfectly on Paramount and Paramount Pro series rifles and require only an Allen wrench to mount. They can also be installed on other brands of muzzleloaders, but a crush washer might be needed to time them properly. (cva.com)





EMF 1858 General Custer

The starting point for this model was Pietta's excellent 1858 Remington, which was then heavily laser engraved in the style of the era as an homage to George Armstrong Custer. Custer owned at least one engraved Remington during the Civil War at the time he wore the brevetted rank of Brigadier General. This pistol is representative of custom-engraved Remingtons purchased by discerning gentlemen of refined tastes up through the mid-1870s, and not a precise replica of the one documented to Custer. It has wooden grips and an 8-inch barrel. (emf-company.com)



Federal Firestick

Federal teamed up with Hodgdon to create this new propellant cartridge specifically for the Traditions NitroFire rifle. It resembles a .410 shotgun cartridge but is entirely plastic and completely sealed from the elements. Each cartridge contains a pre-measured charge of clean-burning Hodgdon Triple 8 granular powder and has a recessed pocket at the base for inserting a 209 primer. The plastic case expands to seal the chamber during firing. Firesticks are color coded for easy recognition. Orange cartridges contain 100-grain charges and purple ones contain 120 grains. The Firestick system makes a muzzleloader as consistent and easy to use as a fixed-ammunition firearm. They're sold in packs of 10. (federalpremium.com)



Kibler's Round-Faced English Flintlock

Master gun-maker and CLA artist Jim Kibler applied modern CNC manufacturing practices to 18th century lockmaking with the intent of creating a consistently reliable product that requires no tuning for proper function. All other locks made today use castings, which are subject to rather wide tolerances. Kibler's new lock isn't an exact copy of any particular 18th century lock, but in the spirit of CLA artists, it's an original creation consistent with the aesthetics of the period. The lock comes fully functional with a bead-blasted finish, ready to engrave or finish as you desire. It's a perfect lock for a colonial long-rifle project, especially if you don't want to spend your time tuning the lock. (kiblerslongrifles.com)





Lyman Great Plains Rifle

When Lyman's Great Plains Rifle came on the scene in the 1980s, it was the most authentically styled reproduction Hawken-type, heavy-barreled, half-stocked traditional muzzleloader on the market. It still is, and now it's even better.

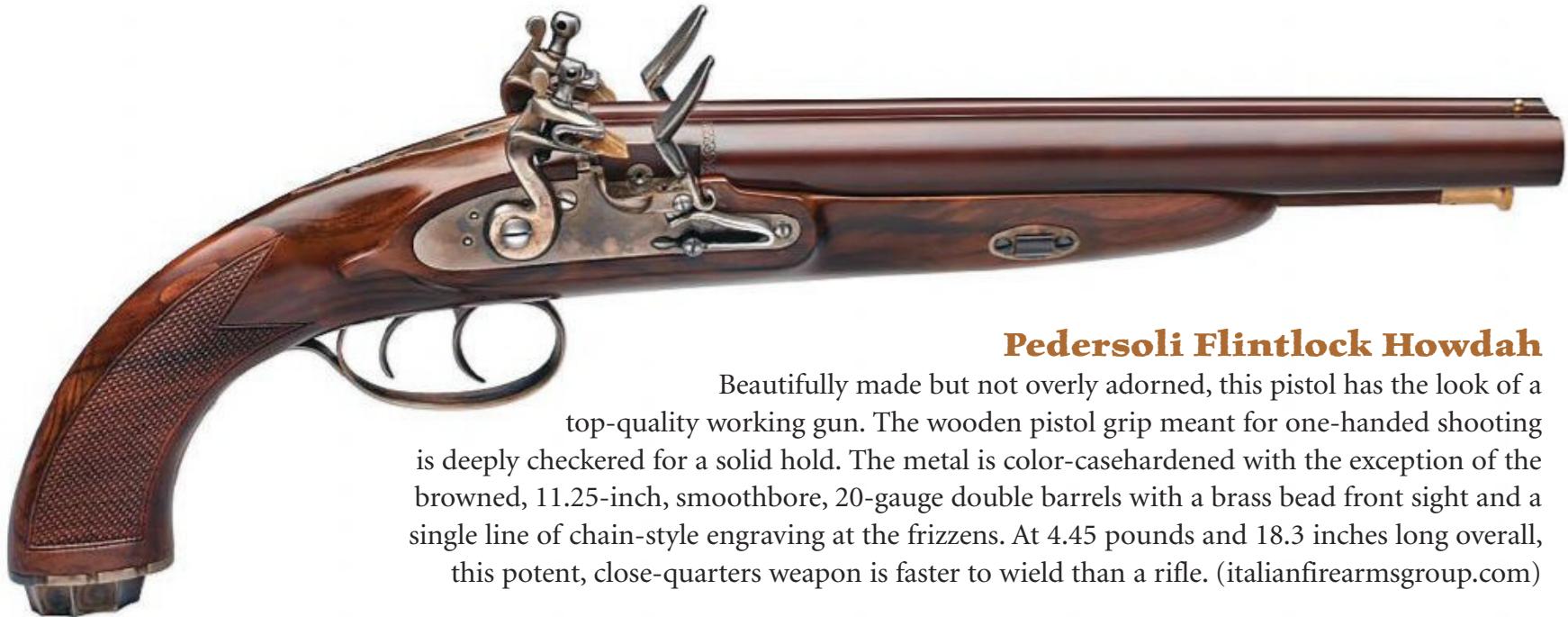
Previously made by Investarms in Italy, Lyman transferred production to Davide Pedersoli, and the first rifles are expected to reach consumers this summer. The cost of the guns will increase by about \$200, but the enhancements will be worth it. The new rifle's lines will closely follow the old, but with the exceptional finishing, wood-to-metal fit, smooth trigger and lock action, and Premium Match Grade barrels for which Pedersoli is famous. A Hunter variant will also be available as an upgrade. (lymanproducts.com)

“Companies in the blackpowder business are similar to those who make conventional firearms in that new products are the lifeblood of their business.”



Matthew Fennewald's Historical Goods

This full-time historical artist and CLA member was recently chosen by the producers of a new Amazon Prime series to recreate authentically styled and weathered accoutrements, and with Fennewald, no two pieces are alike. You'll have to let him make you something original. Fennewald is uniquely informed to do this with a genuine historical understanding gained through study, apprenticeship and the off-grid, pre-Civil-War lifestyle he and his family live. The well-used-looking possibles bags and wineskins on TV generally cost \$300 and \$400 to commission, respectively. The new-looking, undecorated leather scabbards are about \$100. You can find him on Instagram: [@always_ferel](https://www.instagram.com/always_ferel).

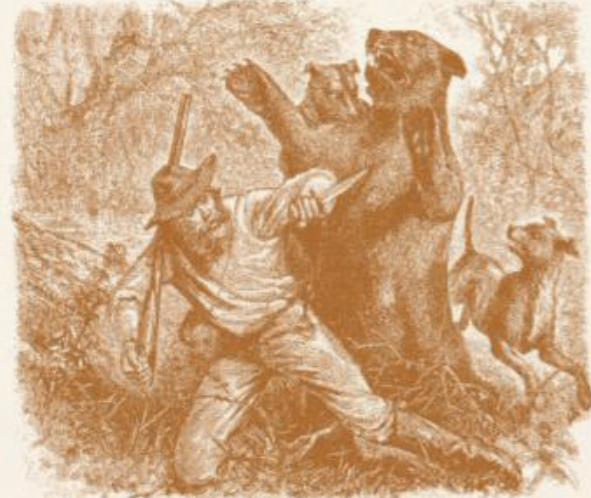


Pedersoli Flintlock Howdah

Beautifully made but not overly adorned, this pistol has the look of a top-quality working gun. The wooden pistol grip meant for one-handed shooting is deeply checkered for a solid hold. The metal is color-casehardened with the exception of the browned, 11.25-inch, smoothbore, 20-gauge double barrels with a brass bead front sight and a single line of chain-style engraving at the frizzens. At 4.45 pounds and 18.3 inches long overall, this potent, close-quarters weapon is faster to wield than a rifle. (italianfirearmsgroup.com)

PowerBelt ELR Bullets

CVA's new .50-caliber Paramount Pro Colorado required a new ELR bullet, so its sister company, PowerBelt, made one. Designed for high velocity, deep penetration and controlled expansion in the target, the ELR bullet is long for its weight, radically pointed and capped with an aerodynamic point of hard polycarbonate plastic that reduces drag, makes the projectile longer and fills the bullet's hollow point to delay expansion in the target. At the bullet's base, the pliable plastic skirt forms a gas seal in the barrel that's so reliable and consistent, velocity and trajectory are virtually identical shot after shot. The ELR bullet can be used in other rifles but works best with magnum and super-magnum charges that might be beyond their safe pressure limitations. (powerbeltbullets.com)



Taylor's & Company Sodbuster

Made for Taylor's & Company Firearms by Uberti in Italy, this .44-caliber model features a forged-steel frame for strength and a dovetailed front sight. The latter is rarely seen on original 1858 Remingtons and permits some windage adjustment. Its dark blue finish and brass triggerguard contrast dramatically with the realistic faux-ivory grips. Rather than the pure, excessively bright white of the previous PVC plastic grips, the new polymer ones have a subtle coloration and figuring that makes them look more like genuine ivory. This is a strikingly elegant-looking pistol. A drop-in conversion cylinder is also available for this model that allows the use of modern smokeless powder, brass-cased ammunition. (taylorfirearms.com)



TDC Universal Straightline Capper

TDC's new brass-body inline capper will work with all pistol and long gun nipples thanks to a redesigned nose spring. In addition, the new side-loading port prevents the upside-down caps that sometimes happen with top-loading cappers. It holds 20 #10 or #11 percussion caps. Remington #11 caps have shown a wide variation in height, and if they exceed 0.18 inches, they may not load at all or will stick in the channel, requiring manual advancement by pushing the spring knob forward. It's worth twice the price for the avoided aggravation alone. (tcdmfg.com)

Traditions NitroFire

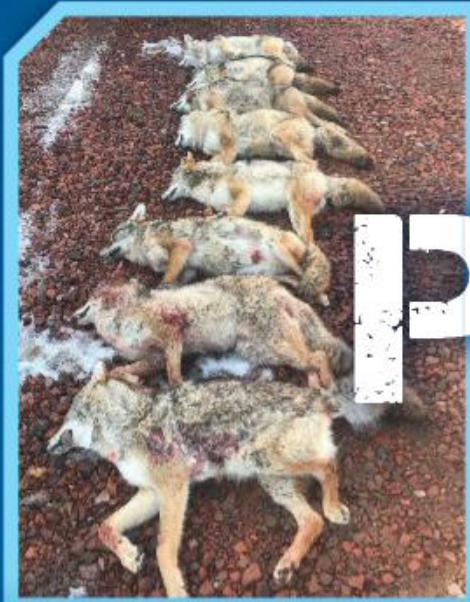
This new .50-caliber blackpowder rifle is a combination breech- and muzzleloader that is weatherproof and only slightly more complex to operate than a single-shot H&R Topper shotgun. Breaking open the action reveals that it has no breech plug. The barrel is actually open from breech to muzzle, with only a small raised shelf dividing the chamber area from the rifled portion. Bullets are pressed down the bore from the muzzle with a ramrod in the conventional way until they bottom out on the raised shelf just before the chamber area. A specially designed, premeasured and sealed, propellant charge called a Firestick is loaded from the breech and then primed with a 209 primer. Because the charges are pre-measured and completely sealed, the NitroFire rifle can't be accidentally overcharged, is easily rendered safe to climb over an obstacle by just removing the sealed charge from the chamber, and will fire reliably in the pouring rain. (traditionsfirearms.com) ★





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STEALTH PREDATOR POPPING

Go on a mission to learn what works best in the high-tech hunting fields

BY ROBERT JORDAN

Earlier this year, some friends and I decided to pool our high-tech resources and go on a series of night hunts for coyotes. In all fairness, none of us have much experience hunting coyotes. However, our experience working for Uncle Sam both domestically and overseas—along with access to a wide range of night-vision gear, thermal scopes, lights and lasers—would give us a huge advantage. This would be a test of what equipment works best. This stuff is expensive, and if you save up and can only buy one type of scope or night-vision goggle, what kind should it be?

Not everyone embraces technology. I have friends who like to hunt wearing coonskin caps and carrying muzzle-loaders. I admire their skills, but that isn't the point of this story. Coyotes are classified as predators where I hunt and can be shot year-round, day or night, with virtually no restrictions. I was happy to utilize anything that

gave me an advantage, including head-mounted and clip-on night vision, thermal scopes, suppressors, infrared (IR) lasers and precision weapons.

⊕ The Options

First off, should you use a bolt-action rifle or semi-auto carbine? Well, bolt-action rifles tend to be a little more accurate, and they're available in more calibers than your AR-style rifles or carbines. But a semi-auto can easily put more lead downrange in a short period of time.

Then there's night vision versus a thermal imager. Night vision makes everything appear so much clearer, but thermal makes animals glow brightly, even when they're partially concealed behind grass or a bush. In the night-vision category, we also considered head-mounted units, requiring that you aim with an IR laser attached to the weapon; those that can be clipped onto the rifle behind a day optic; and dedicated night-vision scopes with things like variable magnification.

This debate also stretches into the thermal realm. Everyone agrees that thermal scopes give you a huge advantage, but are they better used as handheld units to simply spot the critters, or mounted on the gun and used for aiming?

⊕ The Equipment

For our purposes, we tested the capabilities of night-vision equipment by using traditional PVS-14 units mounted to bump helmets as well as ANVIS-6 dual-tube units mounted in the same way. We also used a Simrad KN203 and a PVS-27, which are clip-on night-vision devices that mount in front of your day scope for nighttime engagements.

We had a bunch of thermal imagers, including relatively cheap, older civilian models, a military AN/PAS-13 mounted on a rifle, a miniature AN/PAS-23 mounted to a bump helmet and a brand-new FLIR Scion PTM handheld thermal with 8X magnification. To help us get on target, we also



used military-grade PEQ-15s and some older DBALs, which serve as IR lasers and illuminators without any visible lasers.

Finally, for weapons we had everything from bolt-action .308s and 6.5 Creedmoors to AR-style rifles in 5.56mm and .308. All of the guns were suppressed in an attempt to give us the advantage of hiding our position from the prey and allow a better chance for follow-up shots.

The Hunts

We went out on a few different hunts: on a rainy night where we set up in an abandoned building overlooking a pasture; on a clear evening in high rolling hills; in a wooded, mountainous area; and finally on the edge of a tall, sharp bluff with views of a long, open canyon. Trying to hunt in radically different environments turned out to be the most effective teaching tool. I took copious notes about what worked and what didn't.

First, know your equipment. I chose guys who were already experienced in night vision, thermal and IR lasers from a tactical standpoint. Being able to set up battery packs and helmet counterweights and adjust the pitch, height, distance and focus on head-mounted night vision is complex. Knowing how to do it by feel, in the dark, takes practice. The \$10,000 clip-on night vision for your rifle will only be useful if you practice with it in the dark. Make sure it is sighted in, and know your rifle's data on previous engagement (DOPE) for this setup.

Second, be prepared for different or changing conditions. I forgot my bipod and ended up scanning from prone for hours. I did have a shooting mat to pro-

tect me from the cacti, which was nice, but I should have had a bipod.

The first hunt started in a warm gentle rain that became an icy cold, gentle rain. Bring "snivel gear." Dress for weather 20 degrees colder than it is. You cannot move around to warm up. In that same vein, bring lots of extra batteries. Cold conditions sap batteries, and they failed on every hunt. Twice we had even forgotten that specific type of battery.

To sight in an IR laser that also has a visible laser, simply use a reflective target (or make your own with reflective tape) and a magnifying scope to pinpoint exactly where your laser is hitting the target. No

“We didn’t claw our way to the top of the food chain to kill animals with sharp sticks.”

visible laser? Use clip-on night vision in front of the daytime scope to see where the IR laser is hitting your target. A magnifying scope helps sight in your laser at distance.

If your laser sits 2 inches above and 1 inch to the right of your barrel, make sure your bullet impacts 2 inches below and 1 inch to the left of where the dot hits the target. Then remember that your offset is the same at any distance. If you sight in at 50 yards for the laser to hit exactly where

the bullet impacts, it will be off at 100 yards and way off at 200.

Another lesson: Clip-on night-vision scopes are exhausting to use for scanning. They are great for taking the shot, but you need helmet-mounted or handheld night vision or thermal to constantly scan for critters. And larger-caliber rifles with clip-on night vision really give you a distance advantage, but they weigh a ton. Get a good bipod or a Hog Saddle mounted to a heavy tripod.

Night vision shows terrain features far better than thermal. You simply see better. However, animals as big as a horse simply disappear when they hold still. Until they move, they blend into the terrain. Thermal vision makes animals glow. It is far superior for picking out animals lying motionless or skulking in tall grass.

That said, not all thermal scopes are created equal. Some lag considerably, so they make lousy riflescopes. Some cannot pick up the heat signature of a rabbit at 50 yards. We preferred using them as handheld units to scan for animals, and that is where they really shine. Magnification is a huge plus, but most tend to get pretty grainy above 4X or 6X. If at all possible, try before you buy. Cost and size do not always translate into performance.

Using an IR laser mounted on a light AR rifle, plus helmet-mounted night vision, makes for a fast weapon system. The main drawback is simply range. With no magnification on the night-vision goggles, you are probably not going to be able to shoot beyond 150 yards unless you have perfect conditions, high-quality gear and really good eyesight.

Be cautious of using piston guns that



vent gas up through your handguard. They are typically blowing that hot gas right into the bottom of your IR laser unit or clip-on night vision. Even military PEQ-15s can withstand this abuse for only so long. Also, if you're using a piston gun and don't have room on your top rail for an IR laser, don't worry: side and bottom rails work fine. In combat, you want to use your laser

There are lots of options when it comes to night vision, thermal imagers and sound suppressors. Try a few before you buy.

for a short time and then turn it back off. But for hunting, feel free to turn it on and leave it on. If the on/off button is in an inconvenient spot, it really isn't a big deal.

IR illuminators bounce back off tall grass and blind you when you're wearing night-vision goggles. Even IR lasers can be annoying. Make sure your field of fire is free of these types of obstructions, or don't plan on using them. Finally, regular night-vision goggles will give you a headache after two to three hours of continuous use. The headache goes away quickly when you stop using them. Take short breaks and you can use them a lot longer.

Conclusions

At the end of the testing, we learned that different equipment excels in

different conditions. Night-vision goggles and IR lasers are great for up close, but clip-on night vision and a good scope excel at distance. Thermal scopes work best for locating targets, but distance is not their friend, and some work better than others. My advice is to know your terrain.

So what would I buy if I could only afford one setup? My choice is night-vision goggles and an IR laser on an AR rifle. I cannot engage at distance, and my prey probably needs to be moving for me to see it, but this setup works great for me. After that, my next choice would be a thermal scope for locating game. My last choice would be clip-on night vision or a dedicated night-vision scope. However, if I knew all my shots would be beyond 200 yards, then my choices would change. Decide where you will hunt and plan accordingly. ★



Thermal riflescopes like the Pulsar 3-12x52mm Apex XD75A can help you pick out animals easily at a distance. Many models also allow you to adjust the polarity for better clarity, and the Apex XD75A has an amazing effective range of 1,600 yards with its 384x288 sensor.



HISTORIC SPOTLIGHT

MISCELLANY ON THE MARCH

Looking back in time at what soldiers carried during the Civil War

BY RYAN LEE PRICE

Artifacts held and used by everyday people in the past always carry with them a quiet sense of immortality. A book, for example, with the original owner's name scribbled on its endpaper, perhaps still belongs to that person, but it patiently travels through time in the possession of one person after another, all the while retaining the spirit of its original owner. The new owners are mere custodians of these artifacts, helping them along through time to an unknown destiny.

Although fewer things were carried into battle during the Civil War than in later wars, the items a typical Northern or Southern soldier carried in his pack and pockets are ubiquitous with all soldiers—past, present and future. Pictures of loved ones, letters home, important papers and equipment to help him through his time in service were standard gear for these soldiers,

along with comfort items like camping and cooking gear. Let's look at some of these artifacts.



1. An army runs on its stomach, and although not every soldier was fortunate enough to carry with him a full-sized dish, cup and silverware set in his pack, he might have found it a luxury to eat off of a tin plate and drink from a brass cup while in the field.



2. Pictures of loved ones back home were important for maintaining morale. Tintypes were most popular during the 1860s. Unlike ambrotypes or daguerreotypes, tintypes were rugged and could withstand rough treatment while being cheaper to reproduce.

3. The *carte de visite* was a thin photograph mounted on a thicker card that became very popular after 1859. It was a cheap way to send photographs





through the mail, and people collected photographs of celebrities and famous people. Some even poked fun, like this faked one of Jefferson Davis wearing a dress (on page 82).



4. The biggest problem with Confederate currency was that it wasn't backed by gold or silver—it was simply a promise, provided the South won the war. Most Southern states issued such "Greybacks," as did the Confederate government. The \$100 bill was printed by Hoyer & Ludwig in Richmond, and 284,000 were issued in 1862. The \$1 bill shows Clement Clay, a senator from Alabama.

5. These two .69-caliber Minié balls were found in excavations on opposite sides of the battlefields around



Richmond, one southern and one northern, but both exactly the same.

6. Very few women allowed in camp, at least as far as the rank-and-file infantry were concerned, so when



repairs to clothing were needed, thread, needles and thimbles were important to keep at the ready. These two were found in excavations around Richmond, Virginia.

7. Civil War troops wore insignia on their hats and caps to designate their branches. The most popular were crossed cannons (artillery), crossed swords (cavalry) and horns (infantry). The horn, being symbolic of a European hunt, was used before the familiar crossed rifles.



8. Union soldiers used several different button styles. These brass eagle uniform buttons are the most common

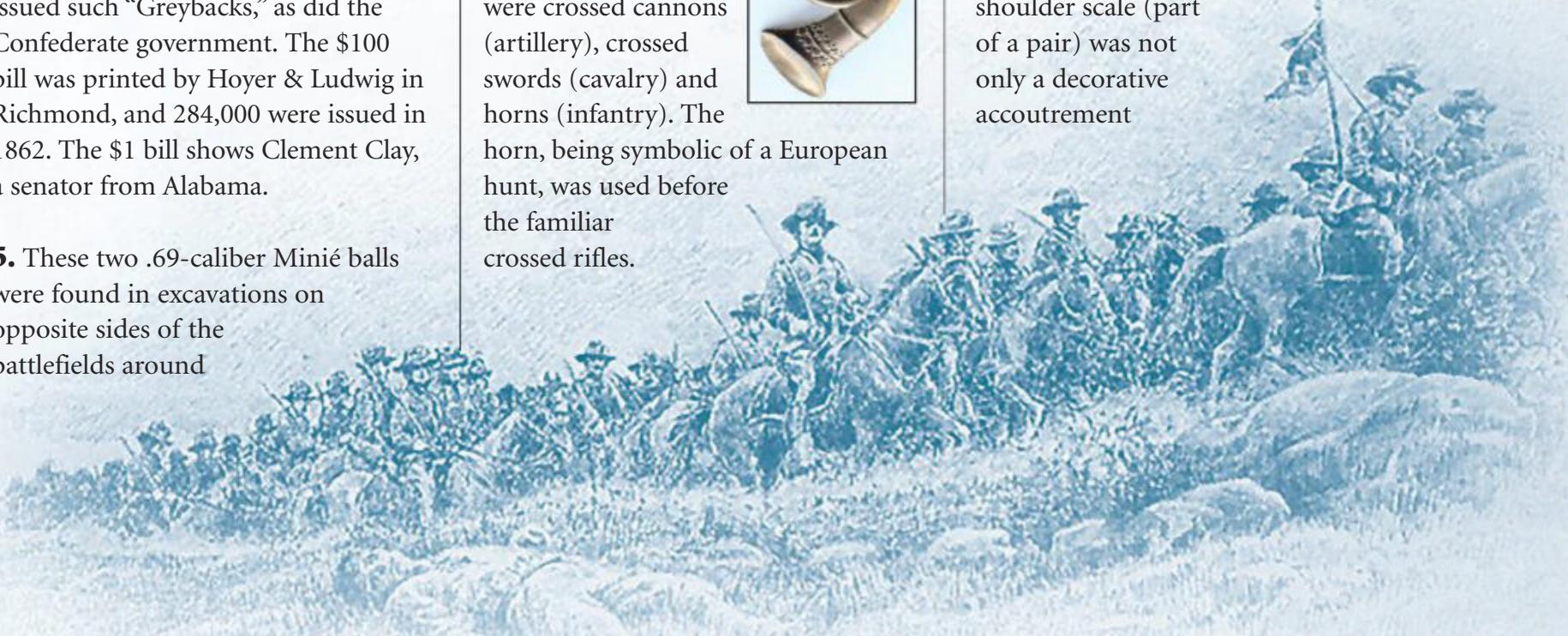


types used for all enlisted men and were available in three sizes. The far right button was used by staff officers.

9. Though books were hard to come by in the field, some well-educated soldiers kept a few choice novels close to their sides. These examples came from the personal library of Elizabeth Custer, wife of the famous George Armstrong Custer.



10. Issued to Union cavalrymen, this brass metal shoulder scale (part of a pair) was not only a decorative accoutrement



MISCELLANY ON THE MARCH



to the uniform but also historically provided some protection during a sword fight.



11. Writing home was of paramount importance to a soldier, and that could only be done with pen and ink. Many types of inkwells were used during the war, but the most common were of the eight-sided "umbrella" style.

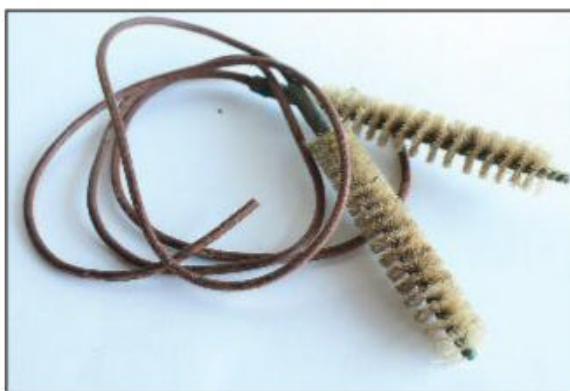


12. Artillery at the time used packages of 15-second fuses like these that were made by the Frankford Arsenal in 1864. The gunner would estimate the time to the target and insert the appropriate timed primer into the metal or wood fuse adaptor in the nose of the shell, which would be ignited on firing and burn into the powder cavity, detonating the shell as it reached the target. The packages were colored to indicate different times.

13. On December 31, 1862, the USS *Monitor* sank off Cape Hatteras, North Carolina, in a severe storm, causing the loss of four officers and 12 crewmen.



This patriotic token was struck in 1863 at a time when most metal coinage was dwindling from circulation. They were used as collector's items as well as currency (valued at 1 cent). The other coins are Indian Head pennies from 1863 as well as a patriotic Union token.



14. These 4-inch bristle brushes, mounted to twisted brass rods and attached to 27-inch-long leather pull thongs, were used to keep the barrels of Sharps carbines clean.



15. Borrowed from the French, the kepi cap was most often issued to Union officers. With the sunken top and squared

leather visor, it was often called a "McClellan cap." It was a favorite among troops and became standard issue for New York infantry regiments.



16. Every soldier had a canteen because water was a lifesaver on hot and dusty battlefields. This five-ring bullseye canteen with a wool cover was produced in Philadelphia starting in 1862. It has a pewter spout and a twill shoulder strap.



17. This black harness belt was issued to every Union soldier. The Enfield socket bayonet is housed in a standard mid-war U.S. scabbard. The percussion-cap box was made by S.H. Young in Newark, New Jersey. A maker of leather goods, Young had a contract with the U.S. Army to produce 10,000 units in 1865.

“The new owners are
mere custodians of these artifacts,
helping them along through time
to an unknown destiny.”





18. The standard .58-caliber cartridge box and shoulder strap with an oval U.S. plate was produced by many companies throughout the North. Christian Schaeffer Storms of New York and S.H. Young of Newark are two examples, but this one, made prior to 1864 because of the brass plate (after 1864, the U.S. logo was embossed into the leather), was produced by Baker & McKinney in New York.



19. Cavalry troops used wide leather slings with snap swivels to keep their carbines handy while mounted.



20. At approximately 2 inches in diameter, grapeshot was devastating at close range. Also known as canister shot, it was used primarily against massed infantry charges.



21. The straight-bladed, 1840-pattern NCO sword was only carried by Union sergeants largely as a badge of rank, setting them apart from privates and corporals. C. Roby & Company of West Chelmsford, Massachusetts, sold several thousand of these swords to the U.S. government during the war.



22. Soldiers commonly carried newspapers. *The Daily Citizen*, edited and published by J.M. Swords, was eventually printed on wallpaper when paper ran out.

23. In many ways, the Model 1854 Lefaucheux pinfire revolver was one of the most modern and advanced military handguns to see use on the battlefield during the war. Thousands of these pinfire revolvers were imported for use by U.S. troops, and at least a few hundred saw service with Confederate troops as well.



24. Per U.S. regulations, cavalry and mounted artillery were to carry brass trumpets rather than the more common copper bugles intended for foot soldiers. This one is made of brass and features a double loop with ferules midway on the tube and at the end below the mouth-piece. It's wrapped with patriotic red, white and blue tassels.



25. The M1850 foot officer's sword was carried by infantry with the rank of major and lower from 1851 to 1865. The solid-brass guard and hilt displays a floral design, while the steel blade is etched with flowers, branches and scrolls. This particular sword was carried by Colonel Galusha Pennypacker, who started his military career at the age of 16 as a sergeant, then became captain of the 97th Pennsylvania Infantry Regiment. He was wounded three times, awarded the Medal of Honor and became the youngest brigadier general in history at the age of 20. ★

RIMFIRE REBORN

Smith & Wesson's Model 648 returns with TWO EXTRA ROUNDS on tap

BY ROBERT JORDAN

I grew up on a farm, and we always had a .22 LR revolver in a pouch behind the seat of the pickup. I shot my first rabbit with that .22 at about 7 yards. It only took me nine shots to hit him.

Every spring we would mend barbed-wire fences. Dad drove ahead and used the Goldenrod to stretch the loose wires while

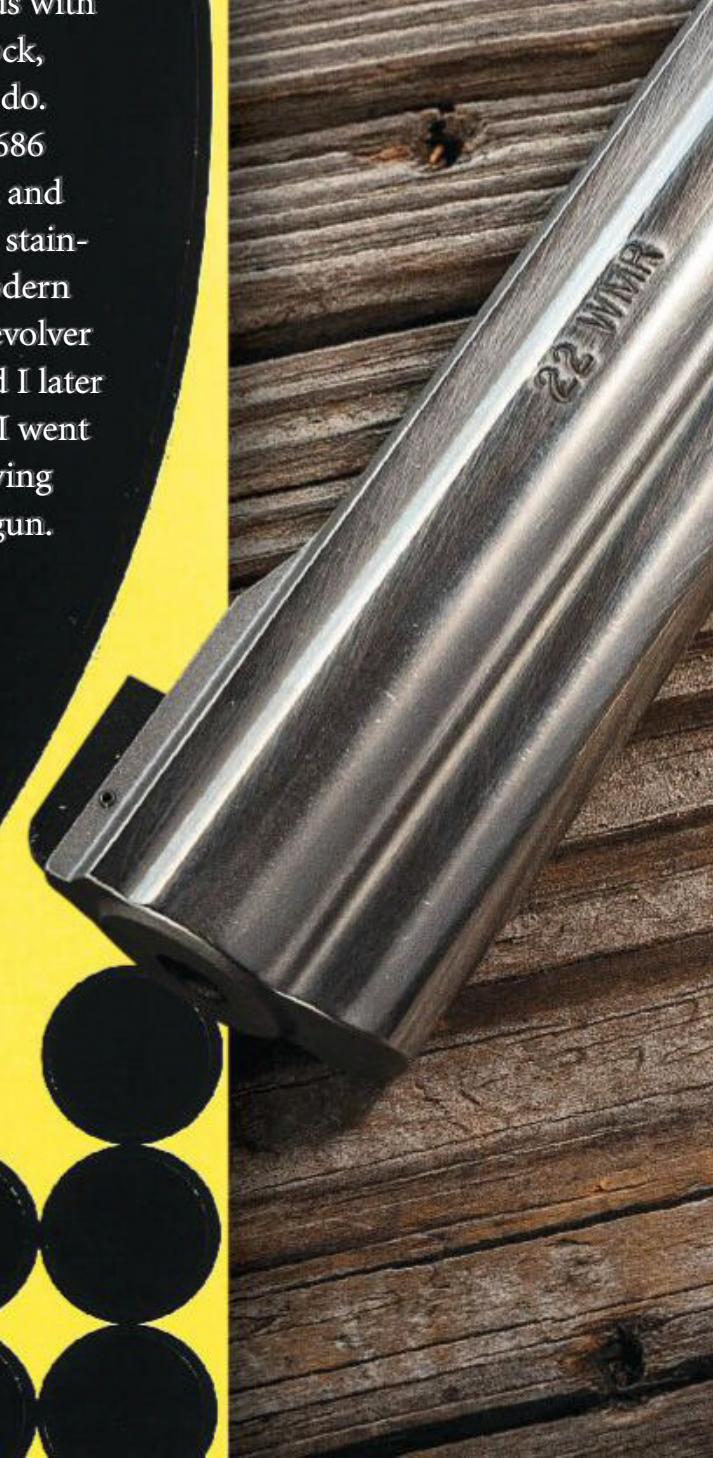
I walked behind with a hammer, a steeple bag and that .22 on my right hip. I killed at least one rattlesnake every year. Once or twice a week, when we were checking cows, we would take five minutes to put a few holes in a soda can before we got back to work. Like so many people, the memory of simpler times, youth and my dad are forever intertwined with a little .22.

That cheap, no-name .22 wore out and was replaced a couple times as I grew up. But the power of the memory remains as strong as ever. Smith & Wesson has long understood that so much of the power of the company's revolvers isn't just the gun themselves, but the memories they invoke and the joint experiences they build. And to its credit, the company makes guns that simply don't wear out. Wheelgunners never ask, "Is that a good one?" when a new S&W model comes out. We all know. It's a Smith. It's incredibly accurate, perfectly made and 100-percent reliable—every time.

Almost 20 years ago, I was preparing to take a test to become a firearms instructor for the agency I worked for. One part of the test was the bullseye course, which consisted of shooting a round target the size of a paper plate at 15 and 25 yards with one hand. I trust my life with my Glock, but that isn't what it was designed to do. I bought a secondhand S&W Model 686 in .357 Magnum with a 4-inch barrel and Hogue grips. It was a beautiful, solid, stainless steel representation of what a modern revolver could and should be. That revolver got me through the course nicely, and I later gave it to my detective partner when I went to Afghanistan. I still think about buying another 686 just because I miss that gun.

⊕ Familiar Ground

Last year at the Athlon Outdoors Rendezvous in Idaho, I spent some time with S&W Media Manager Matt Spafford. He handed me a stainless steel, 6-inch-barreled .22 Winchester Magnum Rimfire (WMR) revolver. It was a K-Frame with a full-length underlug that reminded me of my old 686. The







gun's familiar heft and rubber grips felt like old friends. Then I thumbed the cylinder release, and the cylinder swung out to reveal eight little chambers.

Spafford explained that Smith & Wesson wanted to make the ultimate trail gun. Chambering it for the .22 WMR gave it better velocity for small game, and the 6-inch barrel gave it a longer sight radius, making it easier to aim.

The S&W Model 648 was first introduced in 1989 as a six-shot .22 WMR. It was produced on and off until 2005. Then, in 2019, Smith & Wesson brought back the 648 as an eight-shooter. Speed Beez made a nifty little six-round speedloader kit that held the rounds in a tray so they were easy to pick up with the company's speedloader and drop into the chambers of the cylinder. The company has already released an eight-shot version for the new 648. While

I probably wouldn't carry the kit while hiking, it certainly makes shooting at the range a lot quicker.

Range Time

Spafford agreed to send me a 648 to try, and a couple months later, it arrived at my FFL. I ordered a Weigand Picatinny rail for K-, L- and N-Frames from the company's website. When it arrived, I removed the rear sight from the 648, which revealed three tapped holes that lined up perfectly with the Picatinny rail. Pistol scopes are different from normal rifle scopes in that they typically have less magnification and, more importantly, have virtually unlimited eye relief. Your head only sits about 1 inch behind a riflescope, but it's nearly 2 feet behind a pistol scope.

I didn't have a pistol scope on hand, but I did have a Leupold 1.1-8x24mm

Mark 8 CQBSS scope that I was planning to use to test an AR rifle. The Leupold had fantastic eye relief, and I tried it out on the S&W Model 648. It worked pretty well, even at 8X magnification. I decided to use it for the accuracy portion of the evaluation, and I liked it so much that I left it on for some plinking afterwards.

I also wanted some really good ammo to test this awesome plinker, so I contacted CCI and Hornady and asked if they could help me out. CCI sent me 35-grain A22 GamePoint rounds and 30-grain VNT Varmint Polymer Tip rounds. Hornady sent me some 30-grain V-MAX and 45-grain Critical Defense FTX ammo. I hadn't thought of this revolver as much more than a plinker, but clearly ammo manufacturers look at the .22 WMR as a good varmint round, and Hornady even takes it a step further by offering a

SPECIFICATIONS

SMITH & WESSON MODEL 648

- **Caliber:** .22 WMR • **Barrel:** 6 inches • **OA Length:** 11.1 inches
- **Weight:** 46.2 ounces (empty) • **Grips:** Synthetic • **Action:** DA/SA
- **Sights:** Patridge front, adjustable rear • **Finish:** Stainless steel
- **Capacity:** 8 • **MSRP:** \$752



personal-defense line for it. I would never advocate carrying .22 WMR for that purpose, but if you only own one pistol, then your options are limited. A .22 WMR on your hip is far better than just being armed with a quick wit.

Winters in Montana rarely produce great days for testing guns. The day started windy and miserable, but then suddenly got better. The temperature reached



50 degrees, and the wind died down to nothing. It became a perfect day, and I kept shooting until the sun went down. For accuracy purposes, I ditched my usual sandbags and used an adjustable rifle rest and leather bag so I could fully support the revolver on the yoke and the butt of the grip without touching the barrel. Adjusting the height for each new target took a little extra work, but it guaranteed the best possible accuracy.

After the first five shots landed clearly in the black of a 3-inch Birchwood Casey Shoot-N-C target at 25 yards, I was glad I had taken the extra time. The 648 was incredibly accurate—exactly what you would expect from Smith & Wesson. In my experience, revolvers tend to be more accurate than semi-autos, and that can make a big difference when you're trying to shoot squirrels or varmints at any distance.

After the accuracy testing was done, I went for a long walk outside the range looking for rabbits, only to find someone had beaten me to the little rabbit den I knew about in an old trash pile in a pasture. I found a lot of empty .22 cases, but no bunnies. So, I headed back to the range and set up soda cans, grabbed a big brick of ammo and commenced making those



No, you probably wouldn't install such a big scope on the Model 648 for backwoods treks, but it helped the author get the most from the eight-shooter.

cans dance. I even strapped on a Simply Rugged holster and practiced my quick draw. I've lost count of the number of afternoons I spent doing exactly that when I was a kid. That was 30 years ago, but apparently I haven't grown up much because it was still a ton of fun.

Fond Memories

When I got home, cleaning the 648 was as quick and easy as it ever was for revolvers. No disassembly—just open the cylinder, clean from the bore, and a little Flitz metal polish takes the scoring off the cylinder like magic. I covered the firing pin port with a folded rag to keep solvents

and oils from going inside. After a couple

minutes, the gun looked brand new again.

I had a great day filled with nostalgia, memories and fun. I find it very reassuring knowing Smith & Wesson still makes fantastic revolvers for hunting, plinking and building sweet memories from childhood through old age. The 648's K-Frame feels like the perfect size and weight. The 6-inch barrel makes it easy to aim, even without a scope. I hope everyone with fond memories of afternoons spent plinking tin cans will get the chance to shoot this gun. I think you will fall in love all over again. For more information, visit smith-wesson.com. ★

PERFORMANCE

SMITH & WESSON 648

LOAD	VELOCITY	ACCURACY
CCI 30 VNT Polymer Tip	1,431	1.03
CCI 35 A22 GamePoint JSP	1,236	1.06
Hornady 30 V-MAX	1,506	0.80
Hornady 45 Critical Defense FTX	1,065	1.19

Bullet weight measured in grains, velocity in fps by LabRadar and accuracy in inches for best five-shot groups at 25 yards.



PUMP IT UP

Your childhood Benjamin 392 air rifle just got a major overhaul

BY GORDON D. SMITH



While it might not be the boyhood pump gun you fondly remember if you were lucky enough to own one or envied the neighborhood kid who did, it will nevertheless bring back great memories. I'm guessing old gray-hairs like me as well as 30-somethings might be reading these words, and those memories will still resonate just as strongly among the different age groups. Luckily, new generations will be able to create their own memories because their

parents and grandparents can still purchase the classic Benjamin 392 and use it to safely teach the fundamentals as well as the respect due to any shooting platform.

■ Blast From The Past

The story goes back to the late 1800s when airguns in the U.S. were in their infancy. Low-powered gallery guns had been popular around the time of the Civil War for indoor shooting parlor games enjoyed by both men and women. It was

perhaps around this time that Americans began to show a penchant for "more power," or perhaps it was just the inventive genius of the times that led us to expect better and more powerful products in our everyday lives. One such patent was granted to Walter R. Benjamin of St. Louis, Missouri, in the 1890s.

By 1898, Benjamin had formed the St. Louis Air Rifle Company and tried to make a go of it. His design for the first true compressed-air gun was novel,



but the fledgling company was forced to close its doors. In 1902, the Benjamin Air Rifle Company was formed when he bought his own patents from the defunct company. It was a struggling business for several years, and by 1908, Benjamin had to take on a partner in the form of the Wissler Instrument Company of St. Louis, and thus the Benjamin Air Rifle and Manufacturing Company was formed.

In 1977, the Benjamin Air Rifle Company purchased Sheridan Products

of Racine, Wisconsin, becoming the Benjamin Sheridan Corporation and moving operations to Racine. The Crosman Corporation of East Bloomfield, New York, purchased Benjamin Sheridan in 1991 and moving its operations to East Bloomfield in 1992. By 2015, Crosman made the decision to drop the Sheridan name as part of its adult high-performance lineup of airguns. In 2018, Crosman formed Velocity Outdoor to better reflect its

family of outdoor sporting products.

Early on, airguns had been considered toys because their low power was generated by a spring either directly impacting a projectile or pushing a piston to compress air that was used to drive a pellet, BB or dart out of the barrel. Benjamin's true pneumatic gun changed that. The original design used a long inline pump rod inside the compression chamber located under the barrel and required a hard surface to push against in order to operate properly.

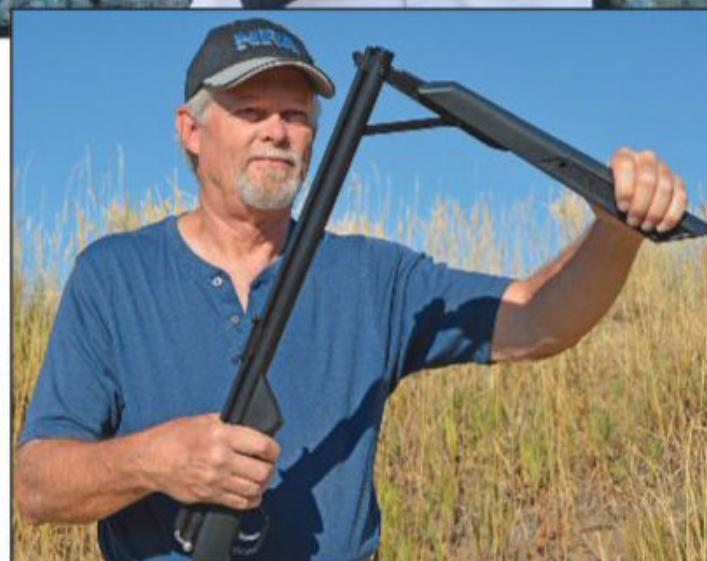
PUMP IT UP

Multiple pumps could be achieved, especially by a full-grown man, and thus higher power levels were reached. Various iterations led to a scissors-type linkage that replaced the inline pump rod with a handle under the barrel and a shortened pump stroke, easing the pumping effort.

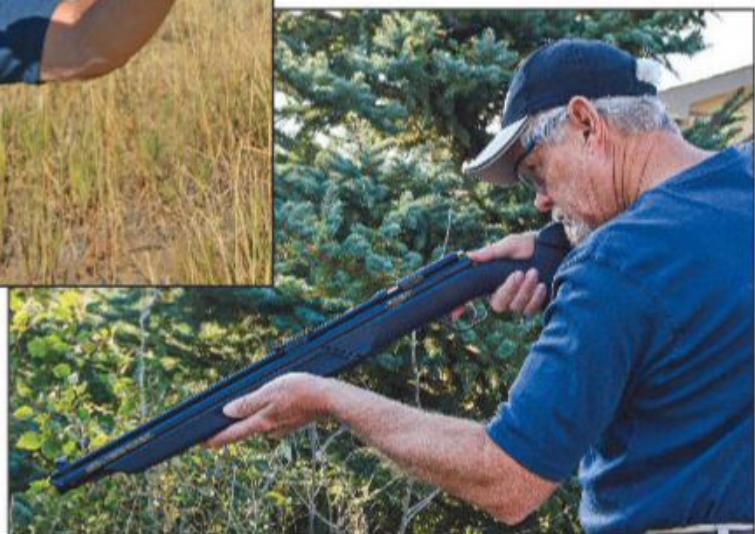
By 1949, the classic multi-pump progenitor of the 392S was born in the Model C Sheridan Silver Streak. It had a level of power and performance that made it very popular and successful even with its premium price compared to the previous Benjamins and other airguns. The Model C continued in production after the Benjamin takeover until 1992. After Crosman moved production, modifications were made, and it was relaunched as the 392 (and 397 in .177 caliber). Now, after 70 years in production, the latest iteration was just introduced by Velocity Outdoor in 2019 as the 392S, with the "S" representing the synthetic stock.

■ Back At It

The 392S remains true to the original, and anyone who handled one of these multi-pumpers in the past few decades will automatically know the manual of arms. The crossbolt safety in the triggerguard (the same location it's held for decades) is applied, and the butt of the rifle is placed on the shooter's thigh. One hand holds the top of the receiver near the loading port while the other hand grabs the forearm of the stock and pulls it firmly upward all the way so that the sound of air being taken into the chamber is heard, then back in a downward arc, being cautious of the pinch points. The owner's manual calls for no fewer than three pumps and no more than 10 pumps to make sure there's enough air pressure to force a pellet out



Built with the same foundation as its wood-clad ancestors, Benjamin's new 392S will provide any airgun shooter—young or not so young—hours of fun.



of the barrel. Any additional pumping does not result in higher velocities and can actually damage the gun. Next, the bolt is lifted and pulled back so that two "clicks" are heard and felt, and the hammer is now cocked. A pellet is placed into the breech and the bolt closed. Disengage the safety and the rifle can now be fired.

The new stock is black polymer, which will take a bit of getting used to for us old-timers because, until now, the stocks have always been made of American

hardwood. Unfortunately, Crosman said that the 392 will no longer be produced with a hardwood stock. There are several benefits to this change, though: The new stock is aesthetically pleasing to the eye and provides a Monte Carlo cheekpiece, a thick rubber buttpad, weather resistance and a redesigned, slightly longer forearm

SPECIFICATIONS

BENJAMIN 392S

- **Caliber:** .22 • **Barrel:** 18.5 inches • **OA Length:** 36.75 inches
- **Weight:** 5.5 pounds (empty) • **Stock:** Synthetic • **Action:** Pump
- **Sights:** Fixed front, adjustable rear • **Finish:** Matte black
- **Capacity:** 1 • **MSRP:** \$250



that provides more leverage and traction when pumping. The pistol grip is also easier for adults to use.

The metal trigger is a single-stage unit that's not adjustable. The trigger pull out of the box was 5.31 pounds and reminiscent of the older Benjamins I've handled. The sights have always been simple and rudimentary but are serviceable and work well at the range that this rifle is suited for, which is up to 40 yards when taking small game and pests. The rear sight is adjustable for elevation and windage. If this were my personal airgun, I would take a touch of white paint to the front sight ramp to make it easier to line up with the rear sight. Accessory mounts are available from Crosman that clamp onto the small brass barrel that sits above the air compression chamber/reservoir if an optic is desired. Take care when mounting a scope to avoid interfering with the bolt handle.

The metal has a matte black powder-coat finish that complements the overall look and is hopefully a little more durable than the old black painted finish on earlier models. The nickel-plated bolt handle looks and functions just like those on the older guns. The rifled barrel is still made of brass and measures 18.5 inches long. The gun weighs 5.5 pounds out of the box.

■ On Target

The Benjamin 392S, being a truly pneumatic gun, has no recoil when firing and is a real pleasure to shoot. As a variable-pump air rifle, the shooter controls the velocity of the shot by varying the number of pumps. Crosman indicates up to 685 fps at the maximum 10 pumps. My results at an altitude over 6,000 feet were slower but very consistent.

Crosman makes over 1 billion pellets and BBs per year, so the company knows a thing or two, and it was no surprise that this airgun liked various Crosman

pellets. However, it's not really that finicky, and while I did not get close to the 800 fps advertised by Crosman for alloy pellets, the accuracy was quite good with Predator GTOs.

The only drawback might be that the 392S is just a wee bit too loud to be backyard friendly if you live in an urban environment. However, I found it quieter than many of the .22-caliber break-barrel air rifles I've shot recently, and the majority of those came equipped with some sort of suppression. Shooting outdoors, I was able to hear the pellet hit the target 20 yards



This rabbit was no match for the Benjamin 392S, which can launch .22-caliber pellets at well over 600 fps after being pumped 10 times.



away over the report. Pumping it 10 times can be a chore, and the plastic-against-metal slapping noise it makes as the forearm closes is a bit annoying and loud. Really though, the toughest part is keeping count of the number of pumps, because us old folks get distracted easily!

The timeless performance and accuracy of these 392 models have kept them on shooters' wish lists for decades, and they're currently the oldest Benjamin airguns still in production. After 70 years, you have to think that Crosman/Benjamin must be doing something right. The older models in my collection still shoot hard and accurately with little maintenance required. It's a versatile little gun that's self-contained—all you need is air and ammo—and it can take you down memory lane or create new memories for any youngster that's lucky enough to be taught its proper usage. Built here in America at Crosman's plant in East Bloomfield with the major components made in the U.S., the MSRP on the 392S is \$250, and it comes with a one-year limited warranty. For more information, visit crosman.com. 

Essential AXEMANSHIP

Everything you need to process wood properly in the backcountry

BY KEVIN ESTELA • MELISSA ZIOGAS PHOTOS

Abraham Lincoln once said, "Give me six hours to chop down a tree, and I will spend the first four sharpening the axe." While this quote is meant to be taken more metaphorically than literally, it certainly does apply to axemanship. There is much more to axemanship than simply knowing how to cut wood. A true woodsman has an understanding of his tools, including how to use them, how to maintain them and how to repair them.

This knowledge improves a person's survivability. Axes can be used to build cabins, fell trees, cut poles for makeshift emergency shelters, process wood to heat a woodstove or simply stockpile cordwood for your fireplace or fire ring. But before you pick up an axe and hit the trail, you need to understand some basics.

► Starting Points

Axes, like any other tool, will vary in size and shape depending on the task at hand. Interestingly, some of the most popular bushcraft axes in the U.S. are made in Sweden and designed/ground for Swedish



When felling a tree, determine how it is standing with respect to gravity. Use your axe as a plumb and line it up with the tree you plan on dropping.

softwoods, meaning they aren't well suited for American hardwood forests.

In general, the way an axe works is by utilizing the tool's weight to do the cutting. If you're accurate with an axe and conserve your energy, you'll be able to swing it with

less fatigue and a higher degree of safety. As a general rule, the heavier the head, the slower you work with it. Also, part of axemanship is understanding that the axe is only part of the equation. Understanding the differences in wood, such as green versus dry and softwoods versus hardwoods, is another. Finding the right wood for heating your home or building your camp is just as important as having the right tool for the job.

► Safe Practices

Given the weight of the head and the leverage of the handle, an axe has the potential to inflict serious bodily harm or even death. The best and safest place for a person to learn is on his knees with no one nearby. On top of that, a full-sized felling axe is safer to learn with than a small hatchet. The safety comes from keeping body parts out of the effective range of the head. By having



(Above) There are times when swinging an axe is impractical and saws make more sense. Bring the right tool for the job. **(Left)** Classic pairs include this hatchet with a folding saw; a felling axe with a bucksaw; and a splitting maul with a chainsaw.





novices start chopping on their knees with a long axe handle, if the head misses the target, it will impact into the dirt and not their feet or lower leg.

While small hatchets might look like toys to some, they are much more dangerous than their larger brethren. The follow-through zone of a hatchet is the thigh and knee area of the leg. When in doubt, always remember this one question before you swing: If my axe cuts through or misses this



Use a pocket stone and file to keep your axe in working condition. File toward the edge in one direction, and use your stone in a small circular motion.

wood, where is the edge headed? That will keep you safe most of the time. In a survival situation, a saw is safer than an axe.

The proper grip on an axe is firm but not overly strong. Gripping an axe, or any tool for that matter, too strong only results in loss of blood flow. This will make your hands feel colder in freezing temperatures. When using two hands, the lower hand on the handle remains stationary while the top hand slides down the shaft to meet the lower hand. You can always choke up on a handle for close work, but always utilize the mechanical advantage of a longer handle when chopping.

"The Scout"

By David Wright



Accuracy is more important than strength with an axe. Here the author uses a custom 5.5-pound axe on a dead standing tree.

► Felling & More

Felling a tree is more than chopping it and yelling, "Timber!" Felling requires an understanding of physics and balance. Prior to felling any tree, consider why you're attempting to do so. There might be sufficient wood nearby for your fire already dead and down. If you scout around, you might also find already downed trees from the last storm.

Prior to felling, always look to see if the path of the falling tree is free to ensure it won't get hung up. Also, look to see if the tree is branch heavy on one side, which can influence the direction it will fall. You can hold your axe head down and use it as a plumb to see how straight the tree stands and if there is a lean to it. Always make a back cut and work on a downward 45-degree angle whenever possible. Cutting upward sends most axes to the follow-through zone where your head is. Remember the old adage "Measure twice and cut once."

Limb ing is the process of removing branches from a downed tree. The easiest way to limb is from the base of the tree to the top, cutting the under portion of the branch nearest the trunk. This helps shear the wood grain rather than compress it from the top down. Use the trunk of the tree as a physical barrier between you and your axe and utilize a brisk golf-club swing to separate the branches. Move yourself around the tree whenever possible, instead of the tree around you—otherwise it's easy to get poked in

the face with a branch. Limbing downed trees is one of the easiest ways to procure firewood in an emergency situation.

While it's possible to make somewhat pointed rounds with an axe, the true companion to an axe is a quality saw. Whether it's a folding saw and hatchet, a bow saw and a felling axe, or a chainsaw and maul, the two go hand in hand. Saws create less waste and nice flat surfaces for splitting. Hatchets and smaller axes can split from bark to bark when the wood is placed in line with the head and handle. Depending on the length of your handle, mind your follow-through and adjust the height of your splitting base. Also, don't attempt to split wood too large for your axe. If your head becomes lodged in the wood, flip the axe over, driving the poll into the base and using the weight of the round to baton through.

If you do have to split a larger log with a small axe, utilize hardwood wedges and cracks in the wood grain. Create a hardwood baton with your axe and saw and apply wedges along the cracks. You will find you can split much larger logs than you expected.

► Maintenance & Storage

It's old etiquette to always ask a friend with an axe to cut something for you rather than borrowing their axe. The reason stems

from the effort it takes to fix a broken edge in case you damage it. In addition to using your axe, you should be familiar with sharpening, carrying and storing it as well.

Sharpening and re-profiling an axe can involve stock removal with a bastard file and honing with a pocket stone. I prefer a convex edge on my axes to support the edge with the most amount of carbides behind it. This is easily maintained by working your stone in a circular motion along the edge. The edge will eventually take on a rounded convex profile.

Once the edge is sharp enough, protect it with a good leather edge guard. These guards do not have provisions for belt carry since this method tends to pull your pants down. When not secured to a pack, axes are usually carried at your side in your hand with the head facing away from the body. When in transport and in storage, a thin coating of linseed or tung oil will help keep the hardwood from drying out and the head from rusting.

Survival in the bush is easier with the right tools. Axes help unlock your survival potential if used the right way. With an axe, you are able to collect larger fuel sources, construct more substantial structures, clear an area of dead or downed trees, and chop wood more efficiently than most other cutting tools. Axes have been carried by outdoorsmen for thousands of years and continue to fit a niche in the woodsman's edged tool kit, alongside saws and knives. Take the time to learn how to care for your axe and your axe will, in turn, take care of you. ★



One method of splitting wood with a hatchet is to use the grain. Line up the hatchet's edge with the grain and the bottom of the handle with the bottom of the wood. Strike the log and axe head in unison, forcing the axe head through the wood.

TANK-TOUGH TOMAHAWK



Hogue and Allen Elishewitz team up to create the trail- and combat-ready EX-TO1

BY DENIS PRISBREY

The Algonquins are generally credited with the invention of what we know today as the tomahawk. We'll never know who first took the original wooden war club and lashed a chunk of stone onto the end of it, but there's no doubt that his tribe enjoyed at least a brief period of close-quarter tactical superiority over the rest of the neighborhood. That is, until nearby tribes began their inevitable scramble to duplicate the fearsome new weapon technology.

In modern times, today's tomahawk has evolved considerably. That stone head survived largely unchanged for centuries, but metallurgy progressed in fits and spurts until heads with actual cutting edges began to replace the shaped rock on a stick as one of the original "multi-tools." Interactions between early North American traders and the indigenous populations introduced metal-headed tomahawks to the natives. These tools are still useful

TANK-TOUGH TOMAHAWK



The sheath uses a retention lever that can be engaged (left) or disengaged (center) as well as three magnets (right) that hold the tomahawk.

in camp and warfare, and nowadays, some knowledgeable woodsmen even replace their fixed-blade knives with small tomahawks when they're on the trail.

Spending 10 minutes on the internet can give you a hundred different varieties of modern hand axes, hatchets and tomahawks in a very wide range of quality, running from cheap cast imports and everyday designs to high-end, hand-forged models in exotic steels and costing hundreds of dollars. The hatchet has never lost favor as a survival tool in either general woods utility or weapon form. If you're looking for one, you want to carefully lay out your projected needs, then equally carefully weed through the crowded field to match those needs to quality levels that can meet them.

Hogue's collaboration with Allen Elishewitz has been successful in the past for both when it comes to knives. So, more recently, when Hogue asked Elishewitz for a small axe design, the result was the EX-T01 Tomahawk. I mentioned "multi-tool" earlier, and this configurable tomahawk has come a long way from anything an Indian warrior fielding a stone-headed stick could possibly have imagined.

► Real Steel

Allen Elishewitz's background includes 30-plus years of martial arts study, time spent as a Recon Marine and a respected career as a custom knife designer and maker. He currently serves on the board of the American Knifemakers' Guild. When you're considering the type of money a high-performance tomahawk costs, qualifications and quality are important criteria upon which to base

your decision, and both are well established here with the designer and maker.

And what exactly are we looking at? Hogue's blade division has used Elishewitz's design talents to produce a 14-ounce, trail-ready and thoroughly packable tomahawk made of S7 steel with either a black Cerakote or "tumbled" finish and G10 handle scales in a variety of color options. I got my hands on a black version with green scales for this review, and Hogue offers a number of accessories and includes an innovative G10 "sheath." It isn't hard to find stylized tomahawks and creative sheathing methods, but you won't find anything else that puts so many features into one package like this system does—and "system" is the word for it.

S7 was chosen because it is a high-strength, non-stainless tool steel with great

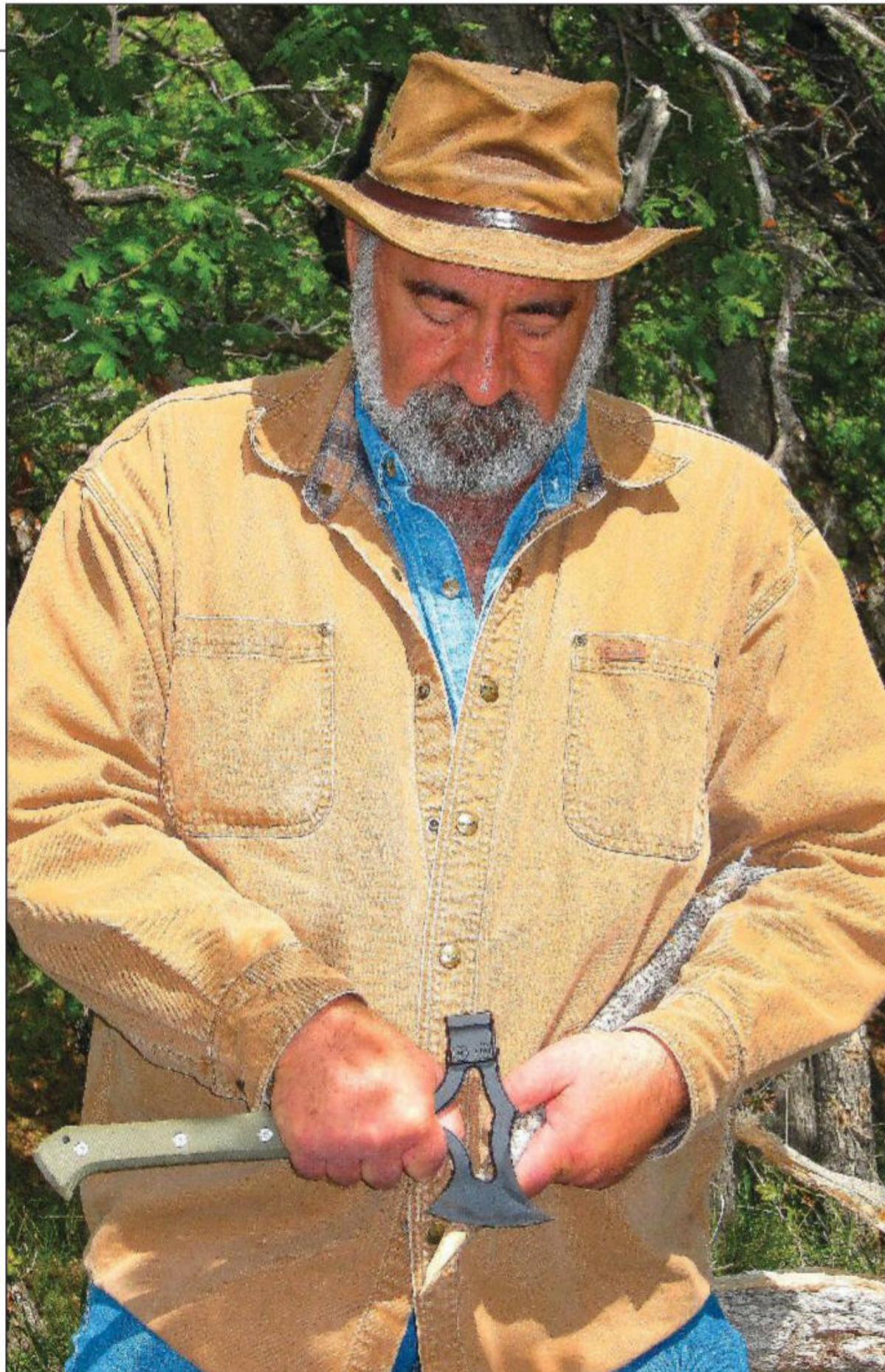
shock and deformation resistance that is typically used in punches, chisels and manufacturing dies. In the EX-T01, it is heat-treated to a Rockwell hardness rating of 54 to 56 to maximize that inherent toughness without taking it too far into brittle territory. The blade portion uses a flat grind, and the edge is honed by hand after the Cerakote is applied.

Each version has an MSRP of \$300, and the one-piece steel construction eliminates the usual bugaboos of the head loosening or the wooden handle breaking. The G10 handle scales are available in Blue Lava, Flat Dark Earth, olive drab or black. They feature angled, non-slip serrations to anchor the handle in even a rain-soaked or bloody hand, and they're firmly attached by five steel Torx screws. A forward flare at the bottom adds an additional hook to resist any fly-away attempts in a slippery or tired hand, and the pommel can be used as a glass breaker or an impact point in a fighting context.

The head's sizable cutout isn't there just to lighten the load—it's a retention slot to mate with the most innovative sheath you're likely to see in quite a while. As it comes, that sheath is a quick-detachable, paddle-style covering that needs no belt to strap it on. The flexible paddle section is slotted for ventilation. It slips inside a waistband or belt for quick donning or doffing, and uses a pair of integral inside wedges to lock it in place. The main outer section includes three strong magnets to retain the tomahawk's head, with a rotating AK-47-style safety lever that sits inside the head's slot and swivel-clicks either up for immediate access or down to secure



The Hogue EX-T01 features super-durable G10 handle scales with non-slip texturing.



The author uses the EX-T01, shown with the hammer poll attached, to fashion a wooden peg.

the tomahawk against getting snagged or knocked loose in brush or other tight spaces. Hogue also sells a MOLLE adaptor that replaces the removable paddle section for external pack or vest carry.

► **More Accessories**

Besides the ingenious sheath, Elishewitz also extended the utility of the EX-T01 by making it user-configurable on the back end of the head. You've got the

option of leaving it as it comes or adding one of three bolt-on accessory pieces in the form of a flat-faced hammer poll, a short spike or a short pry bar. All three are available for \$70 each in the same S7 steel as the tomahawk itself.

You decide which role the tomahawk serves for your applications—weapon or tool—and choose the accessory attachment that best fits that role. The hammer poll (my preference) pounds tent pegs and

handles other light-impact chores around camp, the spike leans more toward a combat scenario, and the pry bar keeps you from snapping off a knife blade tip doing jobs it was never intended to do. All three are attached by a pair of included hex-head screws, and Elishewitz recommends blue Loctite on the threads for heavy use.

One of the most flexible tomahawks around, the EX-T01 cutting edge comes sharp enough for carving chores like notching tent pegs, processing wood for smaller fires, butchering meat on a hunt, building shelters and even light digging for edible plant roots. Don't let that 14-ounce weight fool you—the famed Horace Kephart, the dean of bushcrafters, loved his 0.75-pound tomahawk and carried it everywhere on his jaunts. If this appeals as a utility tomahawk, and it should, check it out. For more information, visit hogueinc.com. ★

Editor's Note: Sadly, long-time contributor and friend Denis Prisbrey passed away on May 9, 2019, at the frustratingly young age of 66. His way with words will be sorely missed.



The EX-T01 is designed so you can use different attachments on the backside of the head for different missions.

BANDANA BASICS

How to make your own neckerchiefs and woggles for comfort and utility

BY THOMAS RAY

Bandanas, or neckerchiefs as they are sometimes called, are among the handiest items an outdoorsman can have, which probably explains why people have been using pieces of cloth tied around their necks for thousands of years. The word bandana comes from Hindi and Sanskrit languages and means to tie or bind.

There is a tradition of bandanas or knotted scarves being used in medieval and Renaissance times, as well as by 18th century pirates, vaqueros, gauchos, cowboys, Native Americans and American sailors. During the late 19th century, Robert Baden-Powell picked up the neckerchief tradition during the Second Matabele War from American military scout Frederick Russell Burnham with whom he was serving in the British Army. He adopted Burnham's broad-brimmed

campaign hat and cowboy neckerchief for his South African Constabulary. Baden-Powell, the founder of the Boy Scout movement who wrote *Scouting For Boys* in 1908, illustrated his scouts with campaign hats and neckerchiefs. The woggle, or knotted slide, was conceived at Gilwell, Baden-Powell's training camp for leaders, but the vaquero tradition of slides stretches back hundreds of years.

Today, the word bandana refers to a large kerchief, usually colorful and worn around the head or neck. Most commercial bandanas are 26 by 26 inches and are usually printed cotton. Silk cowboy bandanas, sometime called "wild rags," are available in larger sizes but are very expensive. Silk is a great material from a wearer's standpoint because the fabric keeps one cool in summer and warm in winter. However, silk comes up short in the durability department.

No one wants to use an expensive piece of fine silk as a potholder or a poke. Cotton fills the bill, but commercial cotton bandanas are too small for many of the chores they're called upon to perform. Fortunately, there is a solution. Walk into any fabric store and look around. The possibilities are endless. You just need 1.5 yards of fabric and a little know-how—no sewing machine is needed!

The Fabric

In choosing fabrics for handmade bandanas, it's important to pick thin materials with a fairly tight weave and a nice feel. Look for a 100-percent cotton material that feels like a newly bought commercial bandana and it should wash up nicely. Most fabrics come wider than a yard. You'll need to ask for 1.5 yards so you end up with a 36-by-36-inch bandana after hemming. It's sometimes difficult to find fabrics printed on both sides, so if having an unprinted side is a problem, go with

solids or find a woven fabric.

Both cotton and silk make nice neckerchiefs, but thin is the operative word—the less bulk, the better.

If the right fabric is chosen, the bandana will break in and get better and better with each subsequent wash. If you choose a cotton fabric, run it through the washer a couple of times with hot water,





Outdoorsmen like *Survivorman* Les Stroud know just how useful bandanas can be when you're truly off the grid.

then put it in the dryer before cutting it. This removes excess dye and shrinks the fabric so that the hemmed edges won't pucker excessively when they're washed. If you're worried about fading, use the old laundry trick of soaking the unwashed fabric in white vinegar overnight before the first washing. This sets the dye. The pieces can then be washed with other clothes as long as they are the same color. Once it is washed and dried, iron the fabric with a hot iron, spraying it with water as you go to remove all of the wrinkles. The heat further acts to set the color.

Let's Roll

Hand-rolling makes a handsome edge on this type of project, but it pays to practice on a small piece of fabric first to get the process down. A tightly rolled edge is desired so that the hem will always be secure. The method illustrated probably originated in Asia and is hundreds, if not thousands, of years old. But it's important to note that heavy string was used for the photos to make the edge visible. For your project use a matching thread in a regular weight.

First, grab a scrap of the same fabric you plan to use for practice purposes. Use

a ruler and colored pencil to draw a border along one edge about 0.5 inches wide. Thread a needle so that you are sewing with only one strand of matching thread. A different color thread was used here for clarity. Tie a knot in the end. Assuming you are right-handed, moisten the thumb and index finger of your left hand. Now pinch the edge of the fabric and beginning at the corner, roll it to the line you drew. It should be rolled as tightly as possible for a length of about 1 inch.

Tack down the rolled corner of the practice scrap tightly with a stitch, coming out on the back (the same side the roll is on). After tacking the corner, push the needle into and through the center of the rolled edge, entering near where it was tacked and coming out about 0.25 inches away.

Now take a short stitch on the body of the fabric as close as possible to the rolled edge and adjacent to where the needle came out. Complete a second cycle by pushing the needle through the center of the rolled edge, and again coming out 0.25 inches away, taking a short stitch beside the rolled edge and so on. This process is simply repeated over and over until the corner is reached and tacked down.

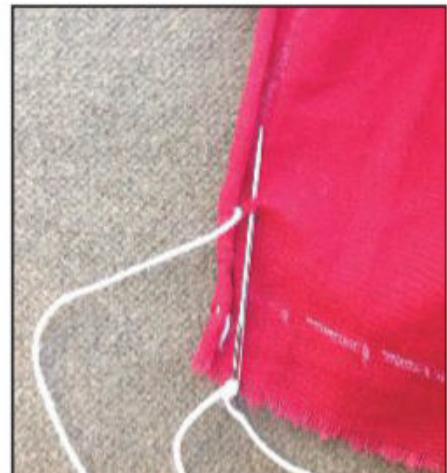
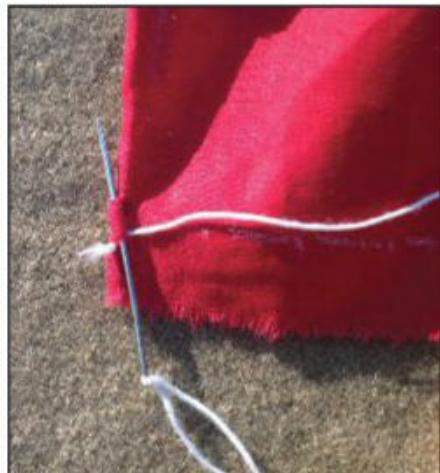
After practicing on the scrap to get used to the process, now it's time to create your bandana. After washing and ironing your fabric, lay it out on a large flat surface. Using a large builder's square, carefully mark out a 37-by-37-inch square. Colored pencils work well on dark fabrics. Be sure to line up the square with the weave of the fabric to avoid cutting on a bias, which causes uneven wrinkling and puckering.

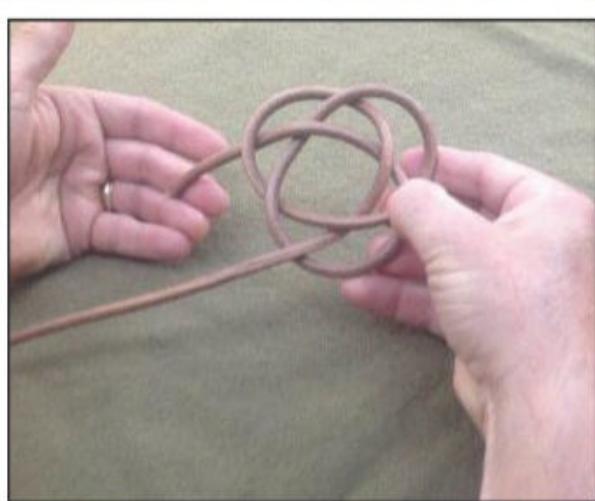
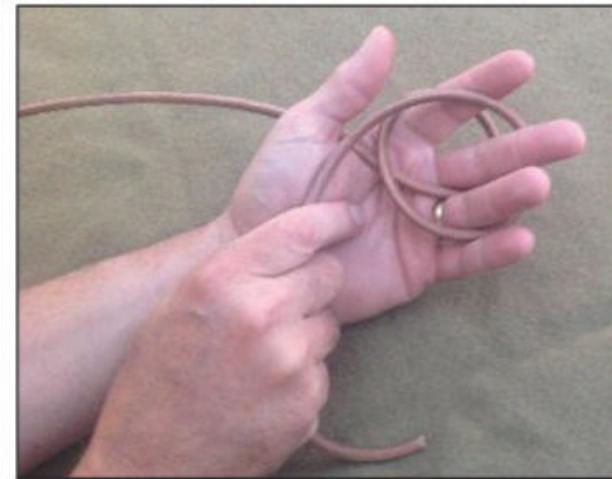
After cutting the square, use a yardstick and a colored pencil to mark out a 0.5-inch-wide border around the perimeter of the fabric. This will indicate exactly where to stop rolling, making for a nice, square bandana with an even hem.

Begin sewing just as you practiced. Starting at the corner, go all the way down one side, tacking down the opposite end securely when the side is finished. Next, instead of working around the corner, go to the other side and complete the hem the same way, making sure to roll the hem to the same side of the cloth as before. Now complete the hem on the other two sides, tacking the corners securely.

As you proceed, use your thumb and forefinger to keep the rolled edge tight. As you catch stitches on the main body of the

No matter which material you use for your bandana, you'll want to roll the edges and stitch them down for durability and a touch of style. These photos show the process with larger thread for clarity.





You can use leather sewing machine belting to make an attractive Turk's-head-knot woggle for your bandana. Start by making a loop around the first and second fingers of your left hand. Continue with a loop around the second and third fingers, following the pattern as shown above. Remember, the knot must be tightened a little at a time as you go for the final product to be nice and tight.

fabric, roll in slightly and pull firmly, but not too tightly. You will find that by doing this, the stitches will be mostly hidden. Once you are a little ways down each side, you can pin the opposite end to a secure object if you wish so that you can keep the work under even tension.

Wash your new bandana to remove body oil and pencil marks. If you iron it after it dries, make sure not to press the hand-rolled edge. The bandana can be manipulated into a neckerchief shape by first folding it into a triangle and then spraying both sides lightly with cold water. Next, holding each end, twirl it in neckerchief fashion, hang it up with the twist in it and let it dry. You have just

created a traditional and very functional piece of kit that has a myriad of uses!

The Woggle

A woggle is simply a neckerchief slide. If a bandana is made of thicker material than silk, a slide alleviates the problem of a bulky knot if the bandana is worn around the neck. There are many ways to make slides, but one of the easiest and most attractive ways is to tie what sailors refer to as a Turk's head knot. These are complex woven knots made up of parts called leads and bights.

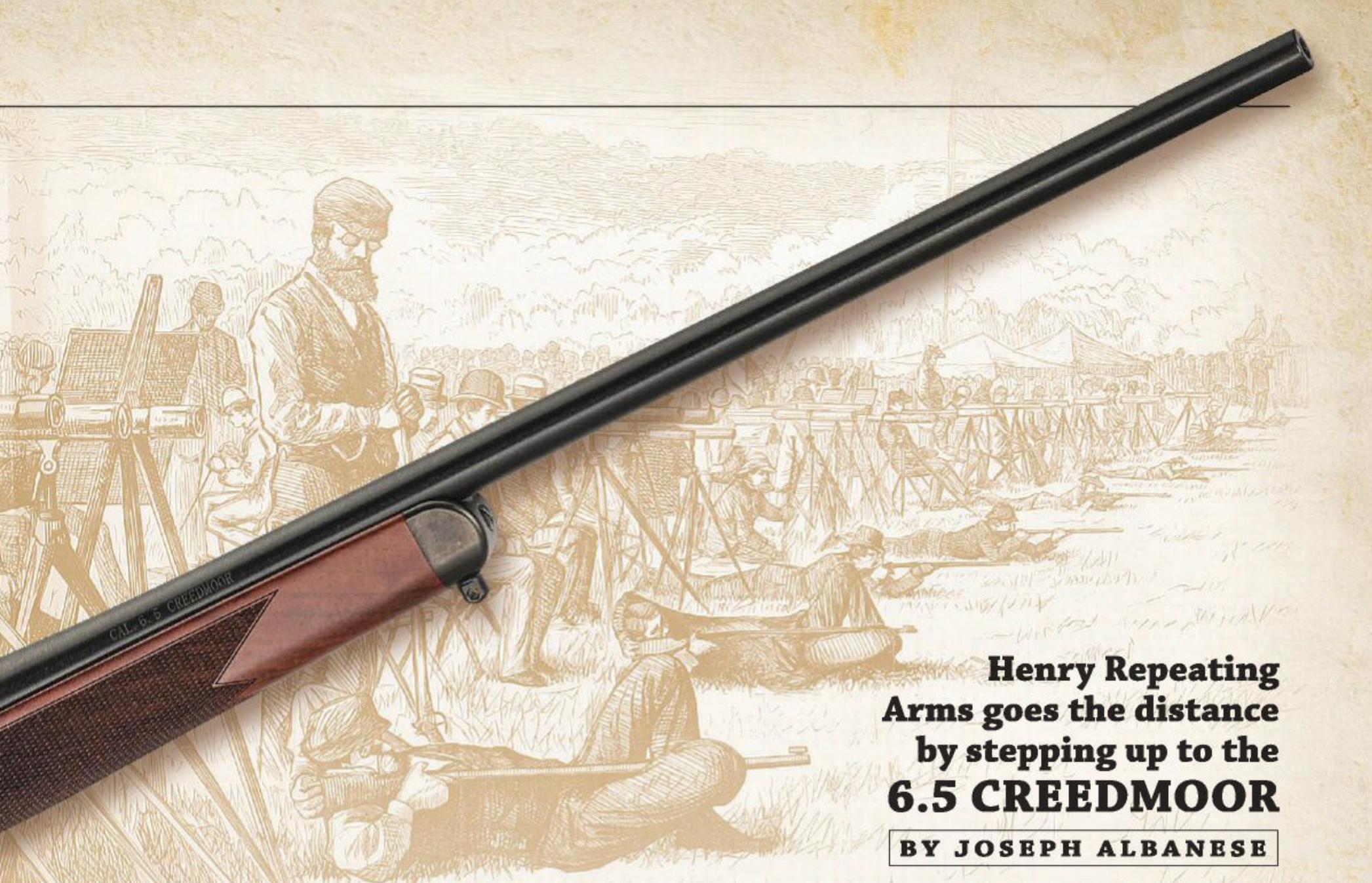
These knots must be system-tightened. This means that rather than simply pulling on each end, the knot needs to be tight-

ened a little at a time as one works around it. A great material to use is leather sewing machine belting. It's round in cross-section and holds its shape well. When oiled, it almost looks like carved wood. It can be found online. Begin by cutting a piece of belting about 4 to 5 feet in length. The accompanying photos explain the process.

The woggle or slide is traditional, convenient and provides versatility to the wearer, avoiding the need for a bulky knot when the bandana is worn as a neckerchief. Your new bandana will surely become one of the most useful outdoor items you own. Don't be afraid to use it, abuse it and push it to its limits. After all, you can always make another one! 

NEW-AGE CLASSIC





Henry Repeating Arms goes the distance by stepping up to the 6.5 CREEDMOOR

BY JOSEPH ALBANESE

THE LONG RANGER

Though the AR-15 has cemented its place as America's rifle, the lever action has retained a loyal following. Proponents tout its simplicity and ability to feed reliably even when the time between cleanings has been too long to remember. While semi-autos might be able to dump rounds faster, with a little practice you can work a lever with some impressive speed—faster than most any bolt gun. Unlike a semi-auto, however, you never need to worry if your ammo produces enough pressure to cycle the next round. And the receiver lockup with a lever gun is usually about as secure as a factory

bolt gun's, giving them an upper hand when it comes to accuracy potential.

But lever guns historically had one inherent design flaw: the tubular magazine. Because of the magazine tubes found on lever-action rifles, bullet selection was limited to flat-nosed projectiles. The rounds are stacked tip to primer, which would cause an explosive chain reaction if a pointed projectile were to dimple the primer of the round in front of it under the duress of recoil. So, for years, lever guns relied on heavy, flat-nosed projectiles to get the job done.

In the Old West, where lever actions served as the original pistol-caliber car-

bines, this was actually an asset. Having your long arm share the same ammunition as your wheelgun meant that you only needed to keep one type of ammo on hand. Resupply runs were much simpler, especially if the nearest town was a distant outpost that received a limited number of shipments each year.

The flat meplats found on typical lever rounds limit their ballistic qualities, and long-distance properties typically suffer because of that and the straight-walled cartridges they occupy. If your shooting distances are limited to 100 yards or less, as they would be for many whitetail hunts, this is of little concern. But if you hunt



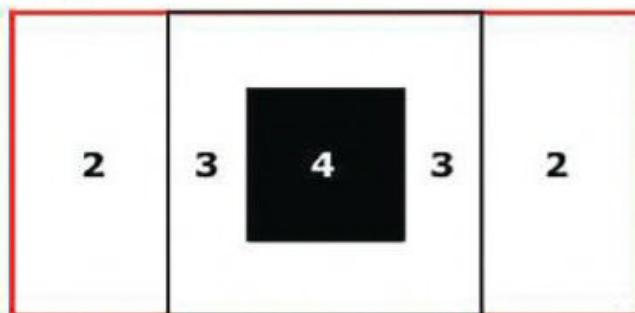
the open expanses of our great land, anything under 500 yards is sometimes considered a chip shot. The pointed bullets and higher pressures of bottleneck cartridges have many advantages when pushing the distance envelope.

⊕ **Henry's Answer**

To get around this glaring limitation, the engineers at Henry Repeating Arms built the Long Ranger series with a detachable box magazine. Now the sky is the limit when it comes to bullet choice. You can choose anything from polymer-tipped rounds designed for rapid expansion to bonded rounds for larger game to custom competition ammo designed with 1,000-yard performance in mind.

I've always likened Henry rifles to the finest Swiss chronographs. Not only are they easy on the eyes, but they just work and

The Target Used for the 1874 Creedmoor Match



The target frame (in red) was 12' wide by 6' high. The "Bullseye" (4) was 3' x 3' square. The "Centre" (3) was 6' x 6' square. Each "Outer" (2) was 3' wide x 6' high.

work well. Like all Henrys, the Long Ranger is built here in America with American steel and walnut. One glance will tell you that the Long Ranger is built with pride. The finely figured stock features checkering that is deep for proper traction without being too abrasive. Another characteristic of Henry rifles is that they are just flat-out fun to shoot. The Long Ranger is no

different, with all the smooth-handling properties inherent in the lever-action design.

When Henry first introduced the Long Ranger series, it released models in the time-proven calibers of .223 Remington, .243 Winchester and .308 Winchester, giving shooters options for everything from varmints to elk. The addition of the 6.5 Creedmoor gives enthusiasts a serious long-distance lever gun capable of doing

everything from ringing distant steel to ethically harvesting medium-sized game.

⊕ **Creedmoor Origins**

In 1872, developers from what would become the National Rifle Association purchased a family farm on Long Island with the intent of turning it into America's Wimbledon. While mention of that name

SPECIFICATIONS

HENRY LONG RANGER

- **Caliber:** 6.5 Creedmoor • **Barrel:** 22 inches • **OA Length:** 42.5 inches
- **Weight:** 7 pounds (empty) • **Stock:** American walnut
- **Action:** Lever • **Sights:** None • **Finish:** Matte black
- **Capacity:** 4+1 • **MSRP:** \$1,105





The receiver is drilled and tapped for scope mounts, and the author installed a Burris 3-15x50mm Veracity for greater precision.

now is sure to bring visions of tennis matches, the English venue originally held shooting contests, with the winner of the signature 1,000-yard event taking home the Wimbledon Cup, a handcrafted tankard comprised of the finest silver. The trophy would quickly gain world renown and attract competitors from across the globe. At one point, even our own Annie Oakley would compete and win there.

Shortly after its purchase, ground was broken on the Creed family farm with intent of building a world-class range to rival the one in the United Kingdom. By most contemporary descriptions, the farm already looked like an English "moor," or a "tract of land preserved for shooting."

As a result, the range was named Creedmoor when it opened on April 25, 1873. The NRA would hold its annual matches there in the following decades and attract international competitors. After a match at Wimbledon in which the American team won in 1875, the coveted Wimbledon Cup was housed at Creedmoor, fulfilling the range's destiny.

• Rounds Downrange

The site of the Creedmoor range lies in what is now Queens Village, part of New York City's five boroughs. As you can guess, there is no range in that spot now, and shooting is strongly discouraged. So, to put

the Long Ranger through its paces near the 6.5 Creedmoor's eponym, I traveled some 60 miles east to the last vestiges of farmland and rural countryside left on Long Island.

Being in such a congested area, I was only able to test the Henry out to 200 yards. If the results of my limited testing are any indication, this amounts to only 20 percent of what this rifle is capable of. I had qualms even uncasing the rifle that day, as I couldn't find a break in the rain that has dominated the East Coast this year. There would be no breaks in the



The Long Ranger is the first Henry design to use a detachable box magazine. Also note the thick action lever and diamond-pattern checkering on the walnut furniture.

clouds that day, and I subjected a rifle that is as pretty as any I have had the privilege of using to nearly 2 inches of rain over the course of a few hours.

The trigger was smooth and crisp with every pull, and the report and recoil surprised me each time—just like the trigger on a serious long-distance rifle should. The gun lacks any superfluous safeties, relying on a transfer bar to keep the gun drop safe without adding any unnecessary steps to getting a round off or to interfere with trigger feel. In my testing, it took 7 to 7.3 pounds of pressure to break the trigger.

I had wondered if the lever throw on a longer cartridge like the 6.5 Creedmoor

would be unwieldy. But my fears were unfounded; the action was just as smooth as it was on every other Henry I have had the privilege of using. To withstand the higher pressures of bottleneck rounds, the Long Ranger utilizes a rotating bolt similar to the one found on today's modern sporting rifles. Despite the longer-than-normal stroke, I didn't experience any failures to feed with any of the ammo I used. The magazine was easy to load, and inserting and removing it from the rifle was accomplished with equal ease.

You can stuff four rounds into the box and one in the chamber, making it legal for hunting in every jurisdiction of which

I'm aware. Keeping hunting and tactical uses in mind, I wanted to try a few different 6.5 Creedmoor flavors in the Henry. I didn't bother with any match offerings, as 200 yards isn't a sufficient test of this rifle's accuracy.

For those looking to ring steel or keep their "back 40" clear of unwanted critters, I opted for Hornady 140-grain American Gunner soft points (SPs). For those who like to pursue deer, I went with Federal's 140-grain Non Typical Whitetail SPs. For those looking to chase larger game, I chose 140-grain Remington Core-Lokt rounds.

To keep things steady for groups, I utilized my favored Caldwell Rock shooting rest. The best group at 100 yards came with the Federal rounds at 1.92 inches. The Long Ranger digested everything with ease, with the largest group only measured 2.24 inches. My groups opened up a bit at 200 yards, but that's to be expected, and the rain was seriously hampering visibility at that distance. I'm confident the gun would print better under more ideal circumstances and fully expect it to shoot

“minute-of-antelope” out past 500 yards in the hands of an experienced shooter.

The real fun began once I had shot all the groups I needed and began taking off-hand shots. Even with the longer 22-inch barrel, the gun handled just like you would expect from a lever gun. Though the rifle would excel as an antelope gun with the extended reach of the 6.5 Creedmoor, the fast handling characteristics make it just as at home in the whitetail woods.

Good Glass

As a former wildlife manager, I’m no stranger to spending extended periods of time gazing through optics. After years of performing wildlife surveys, conducting avian activity budgets and looking for nuisance critters through a set of crosshairs, it takes a lot for a piece of glass to impress me. But Burris did just that with the Veracity.

Most of my lever guns are chambered for slower straight-walled cartridges. As such, the ones that wear glass use lower-

“...the engineers at Henry Repeating Arms built the Long Ranger series with a detachable box magazine. Now the sky is the limit when it comes to bullet choice.”

power optics, usually in the neighborhood of 2-7X, with an odd-man-out fitted with the ubiquitous 3-9x40mm deer scope. So it felt a bit odd installing the 3-15x50mm Veracity on the Long Ranger, but the 6.5 Creedmoor’s 2,700-fps velocity figures warranted the increased magnification.

While sideways rain doesn’t make for an especially pleasant day at the range



Note the rotating bolt (top) and how the magazine fits flush with the receiver (above).

(though every day at the range is a good one), it does serve as a good test for a riflescope. The diminished light provided a good approximation of the crepuscular periods of dawn and dusk, and the moisture-riding winds would have surely found their way in had there been any vulnerability in the scope tube or lens assemblies.

The view was bright, crisp and clear throughout the entire magnification range. As a deer gun, I’d likely set the scope at 4X and leave it. But having the option to crank it up to 15X means that every woodchuck is in serious danger in the off-season. Those out West would find this to be the perfect combo for a truck or scabbard gun, with 3X dealing with close-up or moving targets handily, but also having

enough magnification in reserve to reach out to that coyote some distance away.

If you want to take distance to a new frontier with a gun similar to those that won the West, look no further than the Henry Long Ranger chambered in the impressive 6.5 Creedmoor. I know I loved it. ★

For More INFORMATION

Henry Repeating Arms
henryusa.com

Burris Optics
burrisoptics.com

BACKWOODS BOW SAW

How to craft a simple cutting tool that could one day get you out of a logjam

BY CRAIG HANEY

For years, I've carried a "possibles bag" in my vehicle for those times when things go sideways and I need something special to get myself out of a sticky situation. The bag doesn't resemble those you might see slung over the shoulder of a mountain man in a David Wright painting. It's more of a beat-up, canvas duffel bag that has seen better days. Space is limited in my vehicle.

The items found inside include a folding shovel, gloves, a space blanket, a first-aid kit, a fixed-blade knife, a Leatherman multi-tool, a flashlight, a Bic lighter, waterproof matches, a fire starter, a Pocket Sierra Saw, a blanket and quite a few other items that could come in handy should the need arise. I never packed a bow saw or folding buck saw because I didn't think I would need one. Well, I was wrong!

A couple years ago, my buddy, Wade, and I were headed down a rugged two-track road to a remote trout stream in western North Carolina that supposedly saw few fishermen. About 2 miles before we got to where we could park and hike down into the narrow valley below, we rounded a curve and found a 16- to 18-inch-diameter tree had fallen across the little-used road. The Pocket Sierra Saw was clearly outclassed, so, disappointed, we headed back to fish the stream close to our camp 14 miles away.

Upon returning home, I added a 24-inch bow saw blade and two 1-inch-diameter key rings to my kit in case I ever need more serious sawing power in the future.

► What You'll Need

Only a few things are necessary to make a primitive bow saw. Any trip I make into the backcountry always includes a Swiss



Army knife—usually a Farmer, Camping or Trekker model, all of which have an excellent small saw. A fixed-blade knife, in this case an ESEE JG3, is on my belt every trip. A Leatherman multi-tool with a saw has also served me well at times. But my materials list now includes a 24-inch, Raker-tooth bow saw blade, two 1-inch key rings and a green tree branch.

It's also smart to have a pair of leather gloves for protection. Save the cardboard sleeve that the saw blade comes in for safe storage, and encircle the sleeve with duct tape for more protection. A better option would be to make a sheath for it by folding over corrugated cardboard and taping it together with duct tape. Wear the gloves for protection in case the saw or knife slips during the assembly process.

A hardwood branch with the right amount of flex would seem to be perfect for the saw, but as I found out in making mine, it's not that simple. The first branch I tried came from a hickory tree and was



about the diameter of my thumb. Using the Swiss Army knife, I cut the branch to about 4 feet long, which would give me plenty of length for the branch to bend to fit my 24-inch saw blade properly. Unfortunately, the branch was too strong to bend enough to seat the saw blade. This also happened with another hickory branch as well as an oak branch. Finally, I cut a piece of softer privet at the right diameter and length, and it bent perfectly.

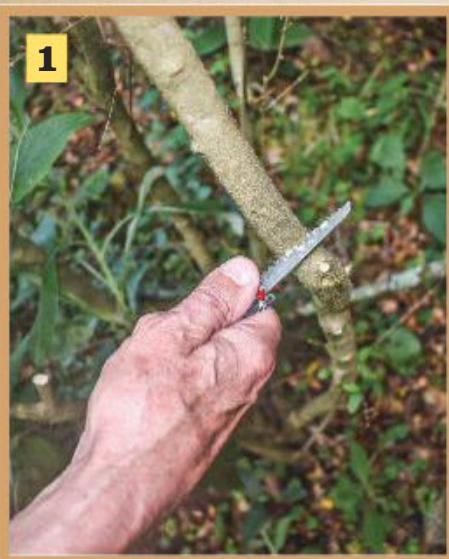
► The Process

First, trim any small limbs from the branch, then bend it to measure the length needed for the saw. Cut the branch square at both ends. The piece needed for my saw was 43 inches long, but that could vary from branch to branch based on its flexibility and how it's bent.

Now you need to notch the ends. Bend the branch to see how it flexes and lines up when held against the length of the saw blade. Mark each end so they are in line to accept the saw blade in a straight line. With your gloves on, use the saw to cut a notch on each end about 1/8 inch deep. This will make it easier to guide the blade into position.

Now, using your sheath knife, carefully split each end of the branch in the notch an inch or so. Attach a key ring to each end of the saw blade. Then carefully insert the blade into one of the notched and slit ends of the branch. Bend the branch enough to insert the other end of the blade into the branch. Make sure both ends of the blade are solidly set into the branch. That should do it.

As with making most primitive tools, practice making a primitive bow saw several times before you include it in your book of backcountry tricks. That way, when you really need it, you can get it right the first time. ★



1. You'll need a 1-inch-diameter branch to support your bow saw blade. 2. The author cut his to 43 inches, which fit perfectly. 3. The process takes very few tools. 4. Trim small limbs from the branch. 5-6. Notch each end with a small knife or saw. 7. Slide one end of the saw blade into a notch. 8. Bend the branch and insert the other end. 9. You're ready to cut!



Turning on cable news these days for an extended period of time can land you in a God-awful state of depression. The question most parents and grandparents find themselves asking is, "Are we leaving our country a better place for our children than how we came to find it?" The glass-half-empty part of me says the internet, excessive video-game playing, absentee-parent homes, drug use and the general belief that kids are becoming more detached from the great outdoors than ever is making things look bleak indeed.

But then, while on a mule deer and elk hunt this past fall in Montana, I had the great pleasure of meeting a special youngster named Earl Harrison. Earl's dad, Ray, is a longtime employee of the Jumping Horse Ranch (jumpinghorseranch.com), which is managed by another fine gent named Jeff Klein. To say that young Earl was happy to see some of the game the hunters put on the ground is a total understatement.

Prior to going on an afternoon elk-glassing mission, photographer Shane Durrance and I got to learn a few things about the Harrisons, and we promised Earl that we'd get him into



YOUNG GUN

Earl Harrison proves that today's kids are the future of our great frontier

the pages of a future issue of *American Frontiersman*.

Earl is 7 years young and loves to spend time with his mom and dad riding bikes, hunting, fishing and horseback riding. He regularly competes in Ennis, Montana, youth rodeo events like pole bending, barrel racing, goat tying and calf roping with his horse, Cysco, and pony, Two Bits. Every chance he gets, Earl loves to help his dad at Jumping Horse.

Ray, a full-of-grit, 52-year-old Montanan, is married to Monica. He loves his family and everything about cattle ranching, big-game guiding and the outdoors. In his younger years, he and his redbone hound, Chica, couldn't get enough of chasing mountain lions. Now they settle for going on shed-hunting missions together along with Earl.

After getting the opportunity to spend just a short bit of time with folks like this, I've come to the conclusion that our future's a lot brighter than some talking heads on the internet or cable news would have you believe. It also makes me think that I need to get my own young son out into the turkey woods this spring with a 20 gauge. —Nino Bosaz

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